THE BRITISH PTERIDOLOGICAL SOCIETY

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The BRITISH PTERIDOLOGICAL SOCIETY was founded in 1891 and is still a focus for fern enthusiasts, its wide membership including gardeners, nurserymen and botanists, both amateur and professional. It provides a wide range of information about ferns through its publications and website, and also organises formal and informal indoor meetings, field meetings, garden visits, a plant exchange, a spore exchange and fern book sales. The Society's journals, *The Fern Gazette*, *Pteridologist* and *Bulletin*, are published annually. *The Fern Gazette* publishes matter chiefly of specialist interest on international pteridology, the *Pteridologist*, topics of more general appeal, and the *Bulletin*, Society business and meetings reports. **Website: www.eBPS.org.uk**

Membership is open to all interested in ferns and lycophytes. **SUBSCRIPTION RATES** (due on 1st January each year) are Full Personal Members £20, Personal Members not receiving *The Fern Gazette* £16, Student Members £10, Subscribing Institutions £33. Family membership in any category is an additional £2. Applications for membership should be sent to the Membership Secretary (address above) from whom further details can be obtained. (Remittances in currencies other than Sterling are £5 extra to cover bank conversion charges.) **Airmail** postage for all journals is an extra £4, or for those not receiving *The Fern Gazette* £2.50. **Standing Order** forms are available from the Membership Secretary and the BPS website.

(**Front cover**: '*Rhipidopteris peltata*' (= *Elaphoglossum*). Illustration from: B.S. Williams (1868) *Select Ferns and Lycopods*.)

Back numbers of *The Fern Gazette*, *Pteridologist* and *Bulletin* are available for purchase from P.J. Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ; E-mail: BackNumbers@eBPS.org.uk

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Vol. 7 2008 No. 1

NATIONAL FIELD MEETINGS

COSTA RICA, CENTRAL AMERICA – 14-28 February

Introduction — Pat Acock

Paul Ripley, Harald Schneider and I met Klaus Mehltreter on 7th February for a pre-tour planning week. This was a wonderful opportunity for Paul and me to get to grips with some of the c. 1,200 ferns before the rest of the party arrived so that we would not be totally helpless. Harald took the opportunity to have a holiday from work but spent the time fruitfully finishing his thinking for a new *Polypodium* phylogeny. Klaus gave us some immediate advice, which was only to worry about coming to terms with the genera and to ignore the species for the first few days. We were often confused when trying to label our photographs in the evening even though we partially took his advice only to identify all species of *Elaphoglossum*, *Hymenophyllum*, *Trichomanes* and *Thelypteris* to genus level with the exception of unique and easily distinguishable species such as *Elaphoglossum peltatum* or *Trichomanes capillaceum*. The week was well spent putting the finishing touches to the schedule, which Klaus had worked out the summer before, and we were able to experience the driving conditions and learn how to drive on many of the unmade roads on steep slopes.

photo: M. Hayward

***Elaphoglossum peltatum*, Costa Rica**

Day 1, 15 February – Volcano Poás — Pat Acock

Tired from our journeys to San José the day before, we gathered for our first briefing at 9:30. Klaus gave out superb folders, which we would refer to constantly to remind us what the ferns looked like when checking back through the day's finds and labelling our photographs.

We spent the day in the vicinity of Volcano Poás. Being a well known tourist attraction, the road up the volcano and the car park were well tarmacked and there was a well-stocked café and shop where people were able to buy the floras they could not find in town. Martin quickly detected that the hedgerow around the car park had large quantities of two-metre high *Lophosoria quadripinnata*. There was also a lot of *Elaphoglossum lingua* in the understorey. We next encountered *Sticherus revolutus*, which often populates these road and forest edges. Another plant Klaus introduced to us was a *Blechnum* look-alike that has no hairs or scales but does have serrate margins and is not closely related to *Blechnum* at all – *Plagiogyria costaricensis*.

Klaus' warning not to try and learn all the species but rather to try to get to know the genera was very good advice but hard to take on board. However, here there were not too many ferns and we could concentrate on *Eriosorus*, which is an interesting genus. Some species scrambled over the woodland edge shrubs and trees and others were more terrestrial in nature. On the short paved walk up to the volcano we were constantly overtaken by tourists, especially parties of school children, as we stopped to marvel at the ferns. *Eriosorus flexuosus* is an interesting member of the Pteridaceae that scrambles up the vegetation on forest edges wherever there is disturbed ground. Just before the summit we came across *E. warscewiczii*; in contrast this grows to about 30 cm and is sparsely pilose on the abaxial surface of the lamina. On the way to the crater, several species of *Blechnum* were common, such as *B. christii* with fewer than ten pairs of pinnae and the larger *B. falciforme* with up to 35 pinnae pairs, both with serrate leaf margins, and *B. schiedeanum*, also large but with entire leaf margins. Looking into the crater was awe-inspiring. There was a small lake at the centre, surrounded by vents where sulphur accumulated. Plants colonised the crater sides to some degree, including a few ferns – mainly one or two species of *Elaphoglossum* that clung to the rock in crevices well above the sulphurous fumes.

Moving away from the crater, we continued on to a volcanic lake in a neighbouring crater with vegetation spreading right down to the water's edge. Beyond this we came across the hybrid *Eriosorus flexuosus* × *E. warscewiczii*. Further along we managed to identify another *Eriosorus* species, *E. congestus*, by its marked hairiness. In the understorey, we saw several *Cyathea suprastrigosa*. Almost completing the circle, Klaus was able to identify *Vittaria graminifolia* and show us the difference between the two *Plagiogyria* species: *P. semicordata* with reduced basal pinnae versus *P. costaricensis* with leaves not narrowed at the base.

We now had a late lunch in the car park prepared by our leader the night before to save time and the ornithological branch of the BPS took much pleasure in identifying the brightly coloured birds that closed in on us.

On our way back we could not resist a roadside stop. Here we saw a whole range of plants in a 100-metre stretch of road including most of the morning's ferns as well as *Polypodium loriceum*, *Terpsichore cultrata*, *Campyloneurum angustifolium*, *Elaphoglossum peltatum*, *Hymenophyllum polyanthos*, *Asplenium serra* and *Arachniodes denticulata*. The *Arachniodes* was found by Martin who had been looking out for it all day having done his homework the night before, checking the list to see what possible gems we might find.

photo: M. Hayward

***Terpsichore cultrata*, Costa Rica**

Day 2, 16 February – La Paz Waterfall Gardens **Michael Hayward**

During the first 25 kilometres of our drive north from San José we saw that many hectares of the hillsides were shrouded with black netting shading *Rumohra adiantiformis* plants. These ferns, destined for the New York flower trade, are a major export trade for Costa Rica. Shortly after passing through Vara Blanca, we reached La Paz Waterfall Gardens, a private reserve lying at an elevation of 1,600 metres. There were many ferns within the gardens, including a group of *Dicksonia sellowiana*, but for our morning walk we headed away from the formal gardens along the 'Fern Trail'. Cut through the native forest, this is one of many well maintained trails through the garden and adjacent forest, all overlooking the spectacular cataracts of the Río La Paz.

Progress was slow along the gently sloping trail as many ferns new to us were identified. *Alsophila polystichoides*, *Cyathea suprastrigosa* and *Sphaeropteris brunei* were the commonest

tree ferns. A new record for the site, the large *Dryopteris*-like *Megalastrum acrosorum* caused much interest, as did a single *Marattia* plant. Where others struggled to identify the species of each new encounter I was mostly pleased to identify the genus, particularly as species names confidently assigned at the start of the walk had a habit of changing at lower altitudes! My list included *Amauropelta*, *Asplenium*, *Blechnum*, *Dennstaedtia*, *Diplazium*, *Marattia*, *Microgramma*, *Nephrolepis*, *Polybotrya*, *Polypodium*, *Pteris*, *Terpsichore*, *Thelypteris*, *Trichomanes* and five different selaginellas, but this was only a fraction of what others identified, including *Asplenium harpeodes* and *Blechnum fragile* as common epiphytes on tree ferns, *Blechnum proliferum* with buds on the rachis near the leaf tip, and *Bolbitis oligarchica* and *Olfersia cervina* with strongly dimorphic leaves. The sheer range of the ferns was astounding and there was no way that any of us could finish the walk before lunchtime.

After a buffet lunch back in the centre of the gardens some were tempted to spend time examining the displays of snakes and tree frogs, much easier to see in captivity than in the rainforest, and to watch humming birds and local finches at the feeders. We then each set off in different directions to explore the byways of this large reserve or to walk the path along the steep river-bank where the well maintained paths and steps were much appreciated. Here I saw a large *Dicksonia sellowiana*, large plants of *Blechnum divergens* and *B. ensiforme*, climbing *Polybotrya osmundacea*, lush *Sticherus*, hanging *Vittaria*, tiny epiphytic *Micropolypodium* and *Microgramma lycopodioides*, all whilst viewing the spectacular waterfalls. I also had a close encounter with a red-tailed squirrel and a pair of racoon-like coati-mundi to end another stimulating day in the field.

The website www.waterfallgardens.com has good illustrations of the waterfalls and of the more touristy parts of the garden but fails to mention the delights of the ferns!

Day 3, 17 February – Volcano Barva **Dan Yansura**

We spent Sunday at a high elevation site near Volcano Barva in the south-west corner of Braulio Carillo National Park. The drive north from San José through the central valley countryside was pleasant, but as we approached the park the road turned to gravel and began to deteriorate rapidly. The steepness of the road eventually proved to be more than our cars could handle and we were forced to push them up the last part.

After a brief stop at the ranger station we headed towards a trail through high elevation (2,600-2,900 metres) cloud forest. Although the trail was only a few kilometres in length, the great diversity of ferns kept us happily occupied for the next four to five hours. Before we even set foot on the trail we spotted *Dryopteris wallichiana*, a rather common species at this site. It is a handsome fern that is also found in cultivation. Nearby a beautiful specimen of *Terpsichore senilis* with long reddish hairs on the underside of the lamina was hanging from a dirt embankment. *Terpsichore* was new to many of us. Other species within this genus, including *T. delicatula* and *T. cultrata*, were common epiphytes on trees.

As the day went on, clouds started moving in close to the ground and we began adding layers of clothing to stay warm. Numerous different ferns, selaginellas and lycopods lined the sides of the trail. A few unusually large ferns attracted our attention: *Blechnum sprucei*, with fronds several metres in length that are proliferous at their leaf tips and formed a large colony, *Pteris livida* with its areolate (netted along the midveins) venation pattern, and the spectacular *Asplenium squamosum*, with fronds over a metre in length.

The forest itself was composed of many very large oak trees and these trees supported a wide variety of epiphytic mosses, bromeliads, orchids, and of course ferns. Much of our time was spent looking closely at what was growing on the lower parts of these trees or on the many large branches that had fallen to the ground. Particularly interesting were *Polypodium wiesbaueri*, for its green rhizome attached to the bark, and the very scaly *Polypodium alansmithii*. The normally epiphytic *Polypodium montigenum*, with its scaly snake-like rhizome, was actually growing terrestrially; it often falls to the ground but can survive and then

climb back into the trees. Large, partially rotted tree stumps provided the perfect growing place for many ferns including the filmy *Hymenophyllum polyanthos* and *H. tunbrigense*.

By early afternoon light rain had started to fall. A beautiful specimen of the finely divided *Arachniodes denticulata* was spotted just off the trail, and we all began our ritual with cameras and magnifying lenses. This beauty was such a showstopper that we decided to make this our lunch break despite the drizzle. A closer look in this area led us to a small specimen of *Culcita coniifolia*. Tree ferns were abundant, with *Cyathea suprastrigosa* being the most common species. A sign proclaiming "Helecho Arborescente Cyathea" was posted near an impressive colony of them, a good reminder to the tree fern enthusiasts among us to locate Alexander Rojas' book *Helechos arborescentes de Costa Rica* upon returning home.

After the long drive back, we enjoyed a great Mexican dinner with Klaus' delightful parents. We were fortunate enough to enjoy their hospitality a number of times in the days ahead.

Day 4, 18 February San José **Pat Acock**

A few of the newer arrivals had a little stomach trouble and decided that they would have to stay in the hotel, so Klaus wisely decided that he would make this our free day to explore San José, the centre of which was only a mile away. After lunch Paul and I started identifying the vast number of specimens that had gathered in our refrigerator over the previous ten days.

Day 5, 19 February – Braulio Carillo National Park **Martin Rickard**

After the highlands of Volcano Barva, today we were at a very much lower altitude (500 metres) in rainforest on the Caribbean side of Costa Rica. The continuous rain confirmed that we were in the right spot! Of course we did not allow the rain to affect our ferning... much!

We gathered in the small car park, where just one rock covered with a large number of fern species, including at least three filmy ferns, bode well for what we might find in the forest proper. We were not disappointed. A well marked trail led off into the forest and ferns were everywhere! Personally I was delighted to see the tree ferns *Cyathea delgadii*, *Alsophila polystichoides* and their much smaller relative *Cnemidaria mutica*. Epiphytes abounded, the climbing *Salpichlaena volubilis* festooning the trees and hemiepiphytic *Lomariopsis vestita* neatly climbing the tree trunks for several metres. Tufts of *Cochlidium serrulatum* grew here and there on the trees along with other grammitids and polypodies. Also catching my eye were many filmy ferns, including the beautiful, iridescent *Trichomanes elegans*, which was scattered along the sides of the path – sometimes actually growing under boulders in the path! *Trichomanes tuerckheimii* is recorded from here but unfortunately I did not see it until day ten. We recorded several species of *Asplenium* with the tiny *A. holophlebium* my favourite. This species has leaves one to four centimetres long and grew mainly on the stilt roots of palms. The fairly predictable genera of low level rainforest were all well represented with at least three blechnums, five danaeas, six diplaziums and two thelypterids. Crossing a river we saw *Asplenium delitescens* on the rocks. *Anetium citrifolium*, with its entire thick-textured leaves, was a rare epiphyte.

photo: M. Hayward

***Cnemidaria mutica*, Costa Rica**

The chosen trail was not very long and all too soon we were back at the cars – perhaps the rain had affected us after all! We ate our lunch and our party then split into two, one group investigating a marsh but not adding many new species though finding plenty of water! My group kept to the road, examining a cutting with abundant *Odontosoria gymnogrammoides* – a wonderful last highlight of a very exciting day.

Day 6, 20 February – Tapanti **Graham Ackers**

The Tapanti National Park lies about 40 kilometres south-east of San José as the crow flies, though it seemed a lot further, the tortuous route taking us into, and miraculously out of four towns and along many bumpy roads. The final road caused the downfall of the trailing car's clutch, necessitating a replacement vehicle. Although the weather on our journey had been fine, we were greeted at the park by rain, which stayed with us all day. Fortunately it was only the drizzly sort, not the tropical downpours of the previous day. Perhaps we were lucky, because the average annual rainfall in the park at its elevation of 1,200 metres is 6.5 metres!

At the administrative offices Klaus paid the entrance fee, and we drove another four kilometres along a forest track lined with curtains of *Lophosoria quadripinnata*. Considering the high rainfall and an average park temperature of 20˚C, it seems remarkable that this species appears to be hardy when grown outdoors in the British Isles. Basic facilities greeted us at our destination, where Klaus immediately started his usual fern tutorial, looking at species in the parking area. These included the delicate *Lellingeria limula*, the climbing *Paesia anfractuosa*, *Elaphoglossum peltatum* with its pretty multi-pinnate sterile fronds, the tree fern *Sphaeropteris brunei*, the hanging epiphyte *Blechnum fragile*, the tree-fern-like *Blechnum werckleanum*, and the giant *Pteris navarrensis* with its spiny petioles.

We ascended from the parking area to a mirador, noting en route *Polypodium fraxinifolium* and an epiphytic *Terpsichore*, and attempting to identify more tree ferns. From the mirador the view over the valley only revealed itself fleetingly through the misty drizzle, and occasionally we spotted the shimmering ribbon of a very high waterfall in the distance. Attempts were made to key out more tree ferns at the mirador, with varying degrees of success – it always amazes me that such large plants can be so problematical to name! Descending, we noted the epiphytic *Salpichlaena thalassica* and another *Blechnum werckleanum*. (I do wish we could grow some of these statuesque trunk-forming blechnums to their full glory.)

After lunch we drove a little way back along the park road to the start of the trail Sendero La Pava, where we descended through pristine rainforest, crossing two bridges traversing torrential tributaries to the Río Grande de Orosi. Along the trail Klaus pointed out many ferns – a beautiful little grammitid *Enterosora*, a sporing *Elaphoglossum* (we saw very few sporing plants during our visit), *Elaphoglossum peltatum* again, the huge entire-leaved epiphytic *Niphidium crassifolium*, the robust *Diplazium striatum*, giant fronds of *Cnemidaria mutica*, *Polybotrya alfredii*, *Asplenium auriculatum*, the climbing *Campyloneurum fasciale* with its two series of sori, a hemiepiphytic (i.e. low-climbing) *Polybotrya*, *Megalastrum acrosorum*, the large tripinnate fronds of *Diplazium gomezianum*, *D. atirrense*, *Trichomanes capillaceum* with finely dissected leaves, *Asplenium maxonii* with leaves ending in a terminal filament, a *Marattia*, *Bolbitis oligarchica* – unfernlike because of its tripartite leaves with a huge terminal pinna, *Danaea*, *Asplenium abscissum*, *Vittaria lineata* and the ground covering *Asplenium cristatum*.

At the Río Grande de Orosi, a fine river in full flow, we noted the rather unassuming (but exciting to some) *Equisetum bogotense* clothing the riverside rocks. Below another bridge further along the trail, our elevation permitted a fine view of some more splendid specimens of the giant *Pteris navarrensis*. But perhaps the most remarkable and unusual fern of the day was *Diplazium palmense* exhibiting a metallic blue-green sheen, a phenomenon well discussed in Robbin Moran's book, *A Natural History of Ferns*. Although not the final fern seen, I think enough ferns have been mentioned for this day, but I am sure that they represent only a small sample of the total species richness of this remarkable park.

Day 7, 21 February – Carara Reserve & Skywalk **Alison Evans**

A change of plan for today in order to avoid the rain forecast for our intended destination – we set off instead towards the sunny Pacific coast, to the Carara Nature Reserve. We were dropped off at the gate at the top of the 'Skyway' trail down to the Villa Lapas hotel, and

immediately saw the climbing fern *Lygodium venustum*, a rosette of *Cyclopeltis semicordata*, and *Pityrogramma calomelanos* with its white farinaceous covering on the lower leaf surface. A short climb on a well paved path took us to a viewpoint, a magnificent plant of *Pteris altissima* on our left, and splendid views over the coastal plain to the Pacific and across to the Nicoya Peninsula.

The track then descended by a more shady bank with a 'nursery bed' of *Pteris* and *Adiantum*. The different frond types of the young *Pteris altissima*, very finely divided at first, then turning into much broader pinnules, fooled several of us. We noted *Blechnum occidentale*, *Pteris grandifolia*, *Lygodium heterodoxum*, the bright green *Adiantum lunulatum* and *Adiantum trapeziforme*. A highlight was a very large *Adiantum*, up to 5-pinnate and standing about three feet high, possibly *A. pectinatum*. A non-ferny highlight was the sight and sound of a pair of scarlet macaws flying high above the valley, Carara being one of the few areas where they are still present in the wild.

The trail zigzags across the valley by way of 'Skywalks' – long suspension bridges high above the valley floor, giving good views of the tree canopy and the forest floor below, but not good for those with vertigo. At the end of the first one we found the first small plants of *Tectaria rivalis*, then much larger specimens further down the path. Four more skywalks, with good views of the fertile fronds of *Lygodium heterodoxum*, as well as the flowers of the various trees followed. On the lower slopes we found a very photogenic plant of *Adiantum decoratum*, and then a colony of *Bolbitis portoricensis*, with its very long trailing tips rooting at intervals to make new plants several feet down the hillside from the parent plants. Near to this there was *Adiantum macrophyllum*, and near the bottom of the trail *Pteris quadriaurita*. We appreciated our cold tropical fruit drinks back at the Villa Lapas hotel, and then lunch at a café overlooking the Pacific – complete with two-foot long iguana begging for food, brown pelicans sitting on a fishing boat and magnificent frigate birds circling above.

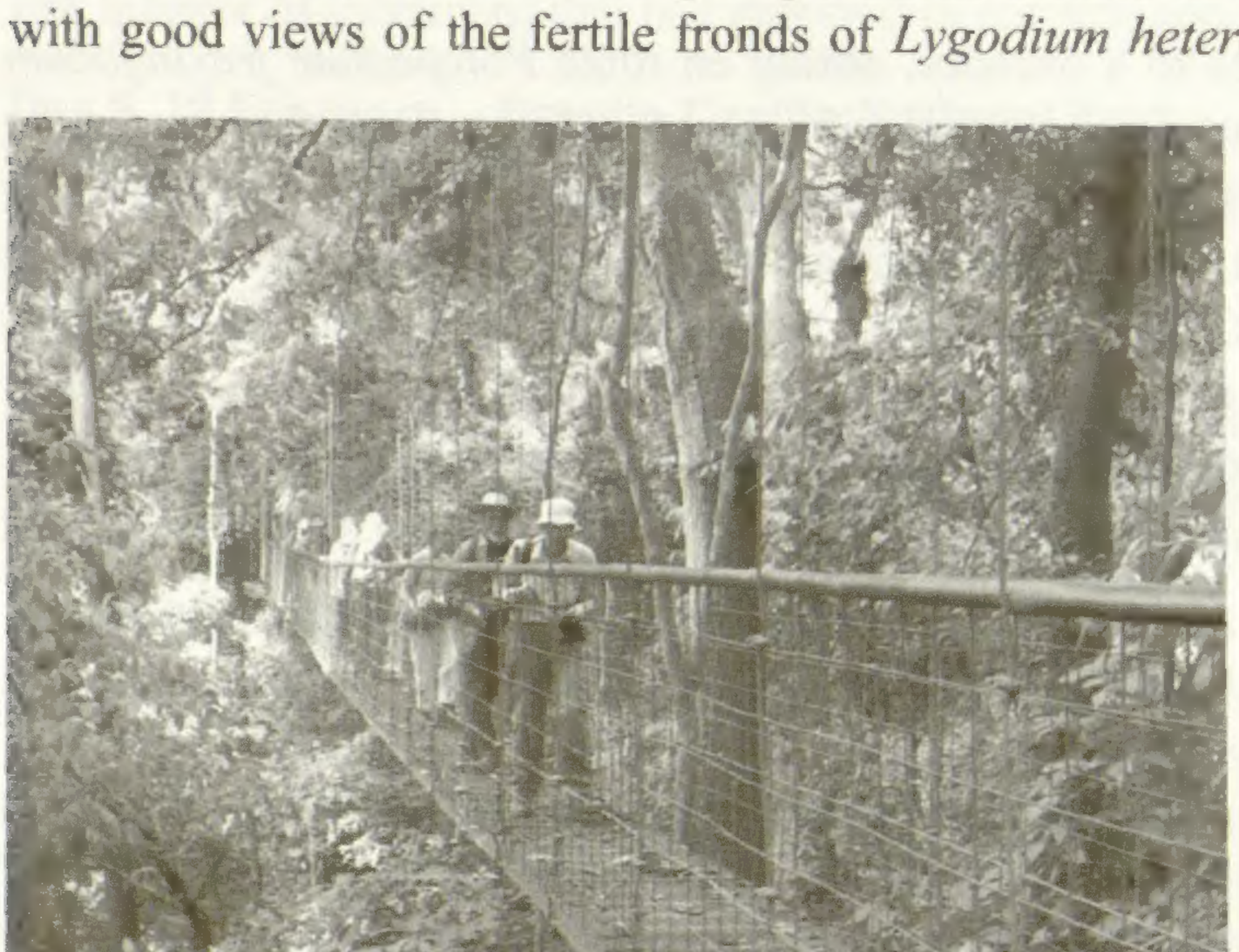


photo: K. Mehltreter

On a Skywalk, lowland Costa Rica

Lizzie Evans

Day 8, 22 February – Cerro de la Muerte & Golfito

We set off at 8.15 from the hotel in San José in bright warm sunshine and drove from 1,200-1,300 metres elevation up through thick grey misty clouds to our highest destination of the trip at nearly 3,500 metres, Cerro de la Muerte. We noted changes in vegetation at the different elevations on the way up, and also the effect altitude had on a sealed bag of crisps!

Klaus explained that the Páramo vegetation at the summit of Cerro de la Muerte was generally rather shrubby and scrubby; there were bushes but no trees. The air was very thin and some of us felt dizzy and struggled a bit for breath. Extreme changes in temperature were noted – when the sun was out it was very hot, but when the cloud and mist appeared it was very cold and damp. We saw some good examples of convergent evolution of growth here. Most of the plants that survive in the harsh conditions at this site do so by having their

leaves pointing straight upwards so they do not get too badly damaged by the overhead sun. They also appear to catch the moisture from the clouds, and then channel this down the upward pointing leaves. Some of the plants are hairy, which also helps them to trap moisture. Klaus said there is usually some rain or mist every day, mostly in the early afternoon. *Sphagnum* moss is common and builds up deep layers providing a water buffer for other plants.

With this in mind we scrambled off the road looking for the 'highlight' group of ferns of the day, the jamesonias. These (and the other ferns we saw) often grew around the base of rocks or larger plants for protection from the harsh elements. We found *Jamesonia scammanae* and *Melpomene moniliformis* at the first big boulder, but Klaus said we would find better examples further on. There were numerous lycopods and *Huperzia*, most notably *H. crassa*. *Lycopodium thyoides* and *Lycopodiella alopecuroides* were also identified. I found an *Elaphoglossum hoffmannii* with iridescent leaves, which I was very pleased with! The highlight clump of ferns at this particular site, however, were a group of *Jamesonia scammanae* growing next to a lovely stand of *J. alstonii*. The latter was notably thicker and hairier than *J. scammanae*. Klaus told us that *J. alstonii* only grows one centimetre a month. Leaves are of indeterminate growth and add new growth on the leaf tip while the pinnae at the base appear to have died off. Leaves die when their tips are killed by cold or dry conditions.

photo: M. Hayward

***Jamesonia scammanae*, Costa Rica**

photo: P.J. Acock

***Jamesonia alstonii*, Costa Rica**

Back around the area we had parked, *Polystichum speciosissimum* was identified. Some of the more dedicated ferners, notably Pat and Paul, disappeared down a hole to identify at close quarters *Asplenium monanthes* with one or two sori and *A. polyphyllum* with several sori on both sides of the mid-vein. We took their word for it!

We then went slightly higher up the same track to another site, where the highlight for some was *Cheilanthes marginata* – a very dry and brown specimen and also an example with new green fronds. There was more *Polystichum speciosissimum*, and also *P. concinnum* and *P. talamancanum*. All three are related, and may hybridise. The pinnae of *P. talamancanum* grow upwards at a 45-degree angle in the sun – but not necessarily in the shade, which is what makes the identification difficult. However, *P. speciosissimum* is easy to distinguish by its completely revolute leaf margins. Pat also found a fertile *Campyloneurum* with an incredibly long frond.

We set off on the long drive to Golfito, at sea level on the south-west coast of Costa Rica. On the other side of the summit of Cerro de la Muerte, the heat that we were to experience thereafter became apparent. A stop at a lovely bar provided Naud with an interesting *Nephrolepis* cultivar, which seriously divided opinions – from "very pretty" to "hideous mutant"! We

passed pineapple fields, and again noted the change in environment and vegetation. The last fern of note spotted on the journey was a *Ceratopteris*, possibly *C. pteridoides*.

We arrived at our idyllic hotel in Golfito in time to catch the last of the sunset over the gulf.

Day 9, 23 February – Las Esquinas Rainforest **Sue Olsen**

Today's excursion took us deep into the rainforest to the Esquinas Rainforest Lodge, our headquarters for another exciting tropical jungle experience. The Lodge, a handsome thatched structure owned by the Rainforest of the Austrians organisation, sits in the midst of 9,000 acres in the Piedras Blancas National Park and offers attractive accommodation for nature lovers searching for a wilderness experience.

We set off across a *Selaginella* lawn, past a *Nephrolepis* hedge, acknowledged a *Polypodium triseriale* and photographed the now familiar *Gleichenella* (*Dicranopteris*) *pectinata*, which surrounded banana trees as it cascaded down the hillside by the road. Our path crossed a highway of industrious leaf cutter ants. Klaus told us that the pieces of leaves hauled back to the nests would be decomposed in time by a fungus that would then be consumed by the ants. Hard work for dinner!

As we headed up the Fila Trail, we were reminded once again to be wary of snakes; happily none joined our group. To everyone's amusement bracken was one of the first ferns discovered. Soon, however, we were completely surrounded by the truly tropicals and once again I marvelled at the lush contrast to the temperate fern world with which I am familiar. Wherever one looks there are ferns and lycophytes of all shapes and sizes.

Before long lithe little 'Christmas trees', *Lycopodiella cernua*, escorted us along the trail. As the surroundings became closer and darker, we delighted in the appearance of filmies including a *Trichomanes botryoides* with a long tip-rooting tail. *Lygodium radiatum* climbed upwards amongst the mosses and the polypodiums that were making their way downwards. Always attracted by red new growth I was delighted to find *Salpichlaena volubilis*, one of my favourite ferns of the entire Costa Rican foray. Indicating its close relationship with *Blechnum*, the foot-long fronds emerge a silken red and then fade to bright green on this vine-like climber. The twice pinnate fertile fronds have long sori that follow the mid-veins of the pinnules, suggestive again of the affinity with blechnums.

Two rare filmies were a highlight of the trip. The handsome and shiny *Trichomanes diversifrons* has two types of fronds, unusual for the genus. The other, *T. tuerckheimii*, flattened itself against a tree looking like papery bark.

Meanwhile, we were discovered by 'sweat bees'. While they do not often sting, as the name implies they like the salt in human perspiration. Soon we were out of their range and on our way back down a long series of volcanic clay red steps on the Ocelot Trail. We were grateful for a dry day, which made our exploration comfortable and superb.

Day 10, 24 February– Wilson Botanic Garden, San Vito **Paul Ripley**

Our second full day in 'the south' took us up hilly roads of the usual variable quality into the hills east of Golfito. The Wilson Botanic Garden, at 1,100 metres, was founded by two Americans in 1945. It comprises a 12-hectare garden of secondary forest that has been left untouched for some 20 years and an area of primary rainforest.

After a group photograph near some impressive introduced *Angiopteris evecta*, and admiration of the tree fern *Alsophila firma* and its epiphytic *Terpsichore lanigera*, we soon entered the secondary forest. A new *Diplazium – D. lonchophyllum*, with the basal acroscopic pinnule on the lowest pinnae characteristically separated by a deep incision, was seen here in addition to *D. atirrens*e with large, fleshy, once-pinnate leaves. Both here and in the primary forest we saw several *Asplenium* species, including an *A. cirrhatum* with tendril-like leaf tips, the once-pinnate species *A. serra* and *A. pteropus*, the latter with a

strongly alate rachis, and *A. cristatum*, a delicate 2.5-3-pinnate species. *Lastreopsis exculta* also caught our eye. We saw three *Pteris* species, the fascinating *P. altissima* with its young fronds feathery and quite unlike the adult, a good example of heteroblastic leaf series, *P. podophylla* and *P. quadriaurita*, a smaller 1.5-pinnate species.

photo: K. Mehltreter

With *Angiopteris evecta* at Wilson Botanic Garden, San Vito, Costa Rica

Lizzie Evans, Martin Rickard, Dan Yansura, Alison Evans, Graham Ackers, Klaus Mehltreter, Paul Ripley, Avril Walkinshaw, Pat Acock, Jack Schieber, Sue Olsen, David Walkinshaw, Michael Hayward, Naud Burnett, Wim Burnett

The primary rainforest was particularly beautiful and at times illuminated by shafts of sunlight through soft rain. We noted the hemiepiphytic *Campyloneurum repens* with more than two rows of sori between the conspicuous main lateral veins of the simple frond, very short petiole and long-creeping rhizome, and a number of species of *Trichomanes*. A *Polybotrya*, different from *P. alfredii* and *P. osmundacea*, was remarked on. Growing epiphytically near the reception area were *Micropolypodium taenifolium*, *Polypodium dissimile* and *P. fraxinifolium*. The latter polypodiums are being placed into the new genus *Serpocaulon*. Finally, Pat spotted *Polytaenium lineatum*, an epiphytic grammitid with simple linear fronds and two to three rows of linear sori on each side of the mid-vein.

We lunched excellently and very healthily in the hostel attached to the garden before leaving this delightful place. Stopping by the roadside to admire the view, the scrambling *Odontosoria gymnogrammoides* was pointed out to us by Klaus.

In the evening we ventured along very rough roads to remote country up the coast from Golfito to Playa Cacao. The heavens opened just as we arrived. The noise on the ubiquitous tin roof scarcely impeded conversation as we enjoyed good basic local cooking. The rain stopped on cue as we left but had done nothing for the quality of the roads on the way home.

Day 11, 25 February- Return to San José via Paraíso del Quetzal (Hummingbird & Quetzal Reserve) **David Walkinshaw**

Golfito breakfasts overlooking the Sweet Gulf (Golfo Dulce) were always productive for an assortment of birds and Alison's bird book was in demand. After a fairly early start, empty roads

clear of large lorries allowed progress such that an unhurried stop at the Balsa Tree Café could be made. Butterflies gave at least two photographers the fly around in the bright sunshine.

Journeying onward over the Cerro de la Muerte with its magnificent páramo vegetation, we were soon at the Quetzal reserve. The narrow road in was soon blocked by our four vehicles as a grove of *Blechnum buchtienii* tree ferns were spotted, with their pink opening foliage most photogenic. On the other side of the track were large specimens of *Culcita coniifolia*, another statuesque fern. On the ground, *Lycopodium thyoides* with its flattened branches and erect strobili was common. We had several sightings of the resplendent Quetzal bird, which nests here because of the abundance of its favourite food, the small wild avocados. Pat found three *Hymenophyllum* species on one fallen tree. Further on, two *Podocarpus* trees, hundreds of years old, were thick with epiphytic bromeliads, orchids and unreachable ferns such as *Asplenium serra*, *Terpsichore cultrata*, *Vittaria graminifolia* and a *Huperzia*.

Back at the reserve buildings we had a splendid lunch of chicken or trout with a local salad that had you guessing its contents. On our way home in the late afternoon the mist had come down to white-out the Pan American Highway. Overtaking, always difficult, was now impossible as we made our way down to the central valley. All the drivers showed great skill and bravery as they made their way onto the San José ring road. We were soon back in home territory, safe and sound at Apartotel la Sabana.

Day 12, 26 February – Laguna de Hule **Paul Ripley**

Passing La Paz, we stopped to admire the lowest, and possibly the most spectacular, of the La Paz waterfalls. Close by, a very large *Thelypteris angustifolia* was admired. Descending through pretty villages to the east (Caribbean) side of the central Cordillera, we stopped to admire an extremely photogenic group of coati-mundis before ascending a track that took us to a private reserve above Laguna de Hule, at about 800 metres. On the Cordillera ridge, the position offers views west towards the Central plain. Laguna de Hule is an (extinct) volcanic crater lake and we walked downwards to reach it. After about one kilometre we entered, on a broad track, an incredibly fern-rich area of forest. We again saw the spectacular *Thelypteris angustifolia* with its simple pinnae, but the feature here was the range of *Diplazium* species, from the simply pinnate *D. ceratolepis*, through *D. striatum* (pinnules more deeply cut than in *D. striatastrum*) to the beautiful 4+-pinnate *Diplazium myriomerum*. Klaus noted ants and other insects living in the hollowed-out rachis. A number of *Tectaria* species were seen, including *T. heracleifolia* and *T. draconoptera*. We saw the amazing and most unfernlike *Hemidictyum marginatum*, with characteristic linear sori on either side of simple leaf-like pinnae, and *Megalastrum pulverulentum*, at first sight looking like a thelypterid fern, but the veins of its basal pinnule segments emerge from the costae and not the costules. At a veritable hotspot of species diversity, Klaus was attracted to a *Blechnum*-like fern with a short decumbent rhizome and sori borne in small cups, comb-like, along the margins of fertile pinnae. At first considered a *Saccoloma*, buds on the rhizome suggested *Dennstaedtia* to Klaus. This was subsequently identified, with the help of Pat and herbarium specimens at the Natural History Museum as *Dennstaedtia wercklei*. Some like their ferns big, but medium species attract me and for me the fern of the day was easily the lime green and aptly named *Lonchitis hirsuta*.

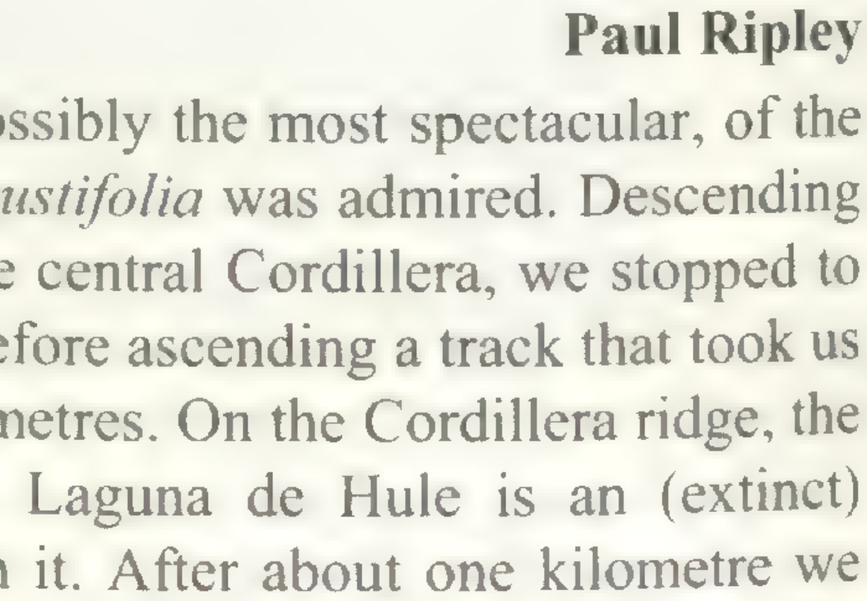


photo P.H. Ripley

***Diplazium striatum*,**
Laguna de Hule, Costa Rica

Favoured again by good weather, we took our lunch of beef and chicken with traditional local accompaniments (rice, beans, chayote = *Sechium edule*, vegetable pear) on the terrace of a bar overlooking the beautiful Laguna de Hule before returning along the San José ring road.

Day 13, 27 February – Volcano Irazú **Pat Acock**

We parked between the primary and secondary crater rims of Volcano Irazú. At about 3,400 metres above sea level the air was rare and over-exertion led to breathlessness. We could see few plants in or around the secondary crater as we skirted the edge of the rim, so we made our way up to the primary crater rim. Ferns had colonised the crater walls and a dense shrub layer extended up the near vertical cliff above. We had 15 species on our list for the morning and fighting our way into the overlying vegetation at various points only slowly revealed four ferns namely *Melpomene moniliformis*, *Elaphoglossum temifolium* (or *E minutum*), *Asplenium monanthes* and *Polypodium montigenum*. I was on the point of giving up and going for a coffee, when a voice called from the bushes and I was able to join Martin who had of course already found a further six ferns. The number of ferns now rapidly increased. We added *Polystichum fournieri*, *Asplenium polyphyllum*, *Dryopteris wallichiana*, *Polypodium murorum*, *Cystopteris fragilis*, *Eriosorus warscewiczii* and *Elaphoglossum mathewsii* as well as an unidentified *Asplenium*, an *Elaphoglossum*, a *Polypodium* and a *Terpsichore*. A well-earned coffee was greatly enhanced by one of Klaus' father's cakes.

We then went to the highest point on the other side of the crater wall but we did not add any new species. It was nice, however, to see hummingbirds working the large orange-red inflorescences of the climbing *Bomarea* (Alstroemeriaceae). Dropping 100 metres, we climbed up the side of Irazú from the road to be rewarded with *Elaphoglossum temifolium* (or *E. minutum*), *Eriosorus warscewiczii*, *Cystopteris fragilis*, *Dryopteris wallichiana*, *Polystichum fournieri*, *Plagiogyria costaricensis*, *Lophosoria quadripinnata*, *Polypodium dissimile*, *Blechnum christii*, *Asplenium polyphyllum*, *A. monanthes*, *Hymenophyllum polyanthos* and *Blechnum loxense*.

Returning, we found our car was short of petrol and only just reached a filling station in time. You can imagine my frustration when on trying to catch up the others I saw a large colony of one of the large tropical equisetums close to the road edge and was unable to return to it to get a picture!

In the evening we had our final meal together in the local Italian restaurant where we were joined by Klaus's parents. Klaus once again announced that we were well in budget and funds would cover the price of the meal and wine. The restaurant was packed and the final vote of thanks had to take place over the noise of the other diners so was unfortunately a little shorter than Martin would have liked for this most splendid of all our overseas tours to date.

Conclusion **Pat Acock**

Next morning, most people were able to enjoy breakfast together before gradually dispersing to the airport.

Klaus is one of the best fern people around. His knowledge of all aspects of pteridology is exceptional and he combines this with patience and the most outstanding teaching ability. He is able to deal with trivial questions right through to the most complex with equal grace, being able to encourage everyone in his company to develop at their own level. Klaus' organisational skills are second to none. He knew a great deal about Costa Rica and had honed the tour down to a two-centred affair, which gave us good working bases where we could collect our data, collate and identify our photographs and specimens and generally discuss the day's work before going out for our evening meal. Klaus not only brought the trip in on budget but was able to include many of the evening meals in the cost. I doubt that anyone could have achieved a better tour in this most glorious of settings, and at such a price.

We were able to see a very varied group of sites without having to travel great distances. We saw ferns in one of the most diverse hotspots on earth and all in the most splendid geological and botanical scenery. We had lunches looking into volcanic lakes and overlooking the Pacific Ocean, dinners on terraces overlooking bays of islands and in the outdoors with rain pouring down on our shelter knowing that Paul was swimming somewhere out in the darkness. All this was possible thanks to Klaus, to whom we give our heartfelt thanks.

MADEIRA – 18-25 April

Introduction — Pat Acock

Madeira, with its clement climate and breathtaking landscapes, has long been a favourite halt for pteridologists. The Rev. R.T. Lowe, having spent a couple of decades studying both the flora and fauna, wrote a Flora in 1868 in which the larger ferns are described. Nearly a century later, in 1949, Irene Manton took a group of students from Leeds University to study the ferns as a next step in working out the relationships between the Macaronesian and European floras. After Benl's report of his 1970 trip appeared in the *British Fern Gazette* (1971), much interest in the island was aroused in both professional and amateur pteridologists. A lot of useful information has accumulated over the years so that a picture is beginning to develop of the fern flora and the way in which it is changing. I am particularly indebted to Andrew Leonard who not only led the 1995 BPS tour of the island but has accompanied me on several other trips and shared his extensive knowledge of the fern flora of this island.

My family arrived a week early for a little extra reconnaissance for this more gentle tour of the island. We were joined by Bryan and Gill Smith and Mattan Schout on Friday 18th April to check on the *Asplenium hemionitis* and *A. aethiopicum* in Ribeira Funda. It is so easy to reach the village now that there is a road. More of the village is under cultivation but the fern site was even more overrun by brambles than the previous year. We then checked out a site at Serra de Agua for *Notholaena marantae* and *Asplenium* (*Ceterach*) *lolegnamense*. We are pleased to report that the latter is thriving having looked decidedly in decline a few years back; Mattan found large numbers of it underneath the bank-side vegetation. We then turned our attention to a southern levada, Levada do Norte, where we discovered another site for *A. lolegnamense*. By the evening most of the rest of the group had joined us.

19 April – Queimadas — Matt Stribley

We set off in good weather along the north coast road heading towards Santana. This proved to be a breathtaking drive on the renowned tortuous but spectacular Madeiran roads. Patrick informed us that construction work had commenced on long-awaited tunnels to by-pass the most narrow and dramatic sections. On reaching Santana our navigation skills were tested but after following a long winding road up to an altitude of 883 metres we successfully reached our destination for the day, Parque das Queimadas. Here we parked and set off with much expectation along a good path in an easterly direction. We only took a few paces before we started seeing many ferns. Many were new to me, including *Stegnogramma pozoi* and *Asplenium monanthes* but amongst these were some old friends such as *Blechnum spicant* and *Dryopteris affinis*. As we walked further along the path we came to areas with greater tree growth and a small stream running out of the adjacent woods. There was a shout of *Trichomanes speciosum*, which we saw on the woodland

photo: B.D. Smith

Robert Sykes looking at *Polystichum drepanum* among *Diplazium caudatum*, Queimadas, Madeira

floor, with upright leaves looking as if they were standing to attention. In the vicinity there were also fine specimens of *Dryopteris maderensis*, *Diplazium caudatum* and *Woodwardia radicans*. The morning passed very quickly and we had seen 23 different ferns before lunch.

We stopped for lunch at Achada do Roche. The owner of the premises, Mario, had a small plant nursery on the site where he was growing, among other things, some tree ferns. In response to Martin's request he invited us in to see the plants, which included an interestingly branched *Cyathea cooperi* and a *Dicksonia antarctica* that had died but had many plantlets of the same species on its trunk.

We retraced our steps to the cars and headed off along the levada in a westerly direction towards Caldeirão Verde. Beside what must be the prettiest toilet block in Madeira (thatched roof) stood a row of planted and well trunked *Dryopteris affinis*. It was only minutes before we were seeing an excellent selection of ferns growing in the damp banks beside the levada. Of the two clubmosses *Selaginella denticulata* and *S. kraussiana*, the former appeared to be the most common, spreading in large patches over the exposed soil and rock surfaces. Later, Mattan's sharp eyes spotted a specimen of *Elaphoglossum semicylindricum* growing high up on a moss-covered branch. As we walked we were privileged to see some spectacular views to the north looking across the stunning landscape towards the ocean, while to our left we encountered a number of waterfalls cascading over the tree-covered cliffs. A highlight of the afternoon (especially for those experienced in Madeira) was the search for *Polystichum drepanum*. Patrick knew the area where it grew but an adventurous spirit was needed to reach it; Martin and Patrick climbed about in a steep gully while the rest of us watched from the safety of a higher path. But it was Mattan who spotted the narrower grey-green fronds of *P. drepanum* amongst the abundant *Diplazium caudatum* and we shouted instructions of its location to those below. A second plant was later found further down the gully. As we continued along the path Patrick pointed out a plant of *Hymenophyllum* that he thought was possibly *H. maderense*. A number of us examined it and the fruiting capsules did appear intermediate between *H. tunbrigense* and *H. wilsonii*. We walked a little further before returning to the cars. The whole day proved to be an excellent introduction to Madeiran ferns, habitat and scenery. In total we saw 30 different ferns of which 18 were new to me.

photo: B.D. Smith

Queimadas, Madeira

Pat Acock, Steve Munyard, Matt Stribley, Yvonne Golding, Roland Ennos, Martin Rickard

20 April – Levada do Norte northwards from São João **Paul Ripley**

Madeira is an elongate volcanic island (although the volcanoes have been inactive for millennia) aligned approximately north-east to south-west. There is very little flat land and the centre of the island comprises an eastern mountainous spine and a more westerly plateau, the Paul da Serra. Where these meet there is a col, at Encumeada. Generally excellent roads circle the island, but the only major road (now shortened and by-passed by a three-kilometre tunnel) to cross the island from north to south passes here before

descending to Ribeira Brava on the south coast. Levada do Norte runs from Encumeada and above Ribeira Brava to supply water to Funchal.

We joined the levada above São João and headed roughly northwards, following the levada as it rose gently. Common plants throughout were *Pteridium aquilinum*, *Polypodium macaronesicum*, *Athyrium filix-femina*, *Asplenium onopteris* and the characteristically reddish-hued *Selaginella denticulata. Christella dentata*, a rather weedy and variable fern was found, typically, near civilisation at the start of the walk. After passing through a wood, *Adiantum capillus-veneris* and *Anogramma leptophylla* were seen on damp walls and levada banks. *Davallia canariensis* was common on drier walls and banks. In wetter places *Equisetum telmateia* and *Adiantum raddianum* were noted.

There was a cool breeze, although the day was sunny. We lunched with views of the Ribeira valley deep below us. We moved on, seeing the occasional *Polystichum setiferum*, neater and more compressed than we are used to, *Dryopteris aitoniana* and in wetter places, *Woodwardia radicans* and *Diplazium caudatum*. Highlights of the day were *Adiantum reniforme*, *Asplenium lolegnamense* and *Notholaena marantae*, the latter two species growing on dry walls of old terraces. We also stopped to admire the endemic *Convolvulus massonii* with white flowers like our species but with woody stems, before returning for the obligatory ice-cream, coffee or excellent orange pressé by the sea in Ribeira Brava.

21 April – Encumeada & Bica da Cana **Yvonne Golding**

We set out from the small car park and café at Encumeada (1,007 metres altitude). From here there were wonderful views in all directions and ferns to be seen within a few steps of the car: the ubiquitous *Pteridium aquilinum*, *Blechnum spicant*, *Dryopteris affinis*, *Athyrium filix-femina*, *Polystichum setiferum* and the splendid *Asplenium onopteris*.

The main party walked along the Levada Grande in a westerly direction. All along the levada we found a profusion of ferns including *Cystopteris diaphana*, *Pteris incompleta*, *Dryopteris aemula* and *Selaginella denticulata*, with *Davallia canariensis* and *Polypodium macaronesicum* growing epiphytically on the laurels. We spotted a fine specimen of *Cyathea cooperi* and a particularly large *Polystichum setiferum* growing in a pretty levada-side garden. An exciting find was the endemic *Asplenium lolegnamense*, locally known as Deiradinha, which looks similar to our own rustyback fern but with slightly longer fronds that are a wonderful blue-green colour. In the curve of the levada side we came across emerging plants of *Equisetum telmateia*, including some stems with cones. A few of us scrambled down the bank to photograph a clump of the very showy *Dactylorhiza foliosa*, an endemic orchid commonly encountered in the laurisilva on Madeira. And if this was not exciting enough, further along the levada beyond the tunnel, we scrambled down the bank again to see several plants of the wonderfully elegant *Polystichum falcinellum*.

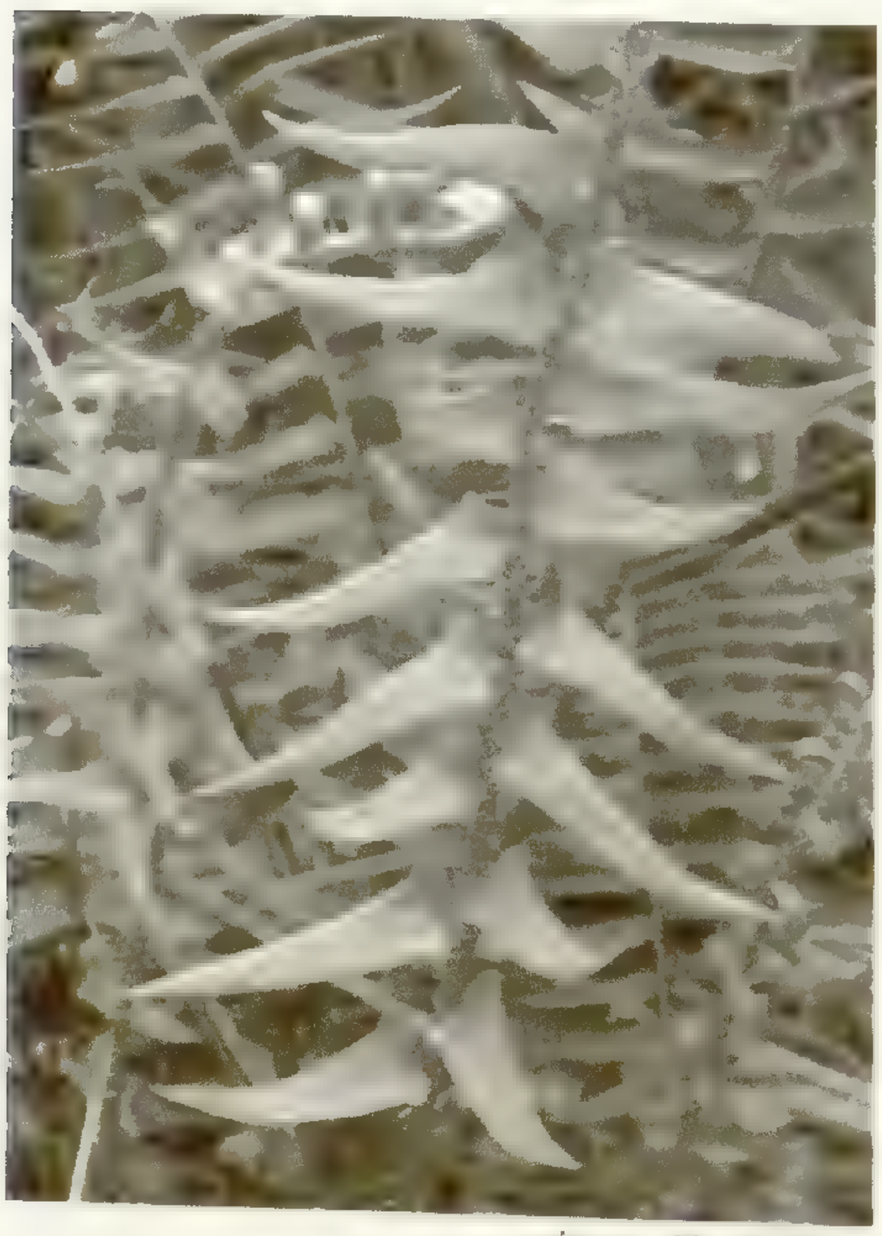


photo Y Golding

***Polystichum falcinellum*, Levada Grande, Encumeada, Madeira**

Retracing our steps we steeled ourselves to walk through the tunnel, almost one kilometre long. It was only the prospect of fine ferns at the other end that got some of us through! Once through the tunnel we entered a wonderful luxuriant ferny paradise in pristine laurel forest. Many of the ferns we had already seen grew here, only bigger; the huge lady ferns were particularly fine. The levada walls were covered in *Stegnogramma pozoi* with frequent

stands of huge-fronded *Woodwardia radicans*. The earthy banks on the other side of the path were lined with clumps of *Asplenium monanthes* and fine specimens of *A. onopteris* with occasional plants of *Doodia caudata*. On the levada side we found many plants of *Trichomanes speciosum* and *Hymenophyllum tunbrigense*. I heard a rumour that *H. wilsonii* was also spotted but I didn't see it. Then keen-eyed Mattan spotted *Elaphoglossum semicylindricum* growing high up the bank. We rested by a high waterfall admiring a tree-sized *Euphorbia mellifera* and some stately plants of the endemic *Musschia wollastonii*. On the way back some of us lingered to admire again the *Huperzia dentata* growing on the sheer cliff near the tunnel entrance. Near the car park we considered the polypodiums growing on the cliff, some of which were *P. vulgare*. Lunch was taken in the local café.

photo: Y. Golding

***Huperzia suberecta*, Levada da Serra, Bica da Cana, Madeira**

We then headed west along mountain roads to Bica da Cana (1,620 metres altitude). We strode out across open moorland, which seemed unpromising at first; my only fern spot was *Pteridium aquilinum* and I started to think we had gone the wrong way. But then we dropped down to the Levada da Serra and things began to change. In addition to many ferns already seen that morning we saw the delicate *Dryopteris maderense* in amongst luxuriant specimens of *Polystichum falcinellum*, *P. setiferum* and *Dryopteris aemula*. The banks were covered in *Stegnogramma pozoi* and *Selaginella denticulata* and the small orchid *Neotinea maculata*. The commonest spleenwort was now *Asplenium anceps*. We found several plants of *A. scolopendrium* growing on the levada side and I managed to miss a whole wall of it; I was surprised to learn that it is very rare on Madeira. By now we were in cloud and some of us slowly made our way back by a slightly different route, which was fortuitous because we found the other clubmoss *Huperzia suberecta*. On the way back we also admired the huge dandelion trees *Sonchus fruticosus*. We had left Patrick and Martin scrambling around the banks. When they caught up with us they were pretty pleased with themselves as they had found the rare hybrid *Polystichum* × *maderense* (*P. falcinellum* × *P. setiferum*). It was too far to go back so we were only able to admire a frond!

It was a very memorable day, with 27 ferns spotted, and I had been able to realise an ambition to see one of my favourite ferns, *Polystichum falcinellum*, growing in the wild.

22 April – Monte Palace Tropical Garden & Levada dos Tornos **Mattan Schout**

On a sunny morning a 40 minute drive took us to Monte, a garden above Funchal at 550 metres altitude. The main interest here was tree ferns; there were numerous *Cyathea cooperi*, which are by far the most common tree fern and we found plenty of sporelings of it as well. Other tree ferns were some fine *C. medullaris*, a mystery *Cyathea* with long stipes, thorns and suckers, thought to be *C. leichardtiana*, *Cibotium* species and some nice *Dicksonia antarctica*. There was a massive *Angiopteris evecta*, a fern Tim and I thought to be *Microlepia platyphylla* and at least five large and very well grown clumps of *Culcita macrocarpa* about two metres high.

The garden is situated in a sheltered valley with a stream running through it; there are some ponds, and overhead trees are mainly large native laurels and alien eucalypts. The mountains of Madeira are frequently covered in mist and so is Monte, which I think contributes to the microclimate. We found several species of fern naturalised, some exotics and some natives: *Adiantum raddianum*, *A. capillus-veneris*, *A. hispidulum*, *Davallia*

canariensis, *Doodia caudata*, *D. australis*, *Christella dentata*, *Pteris tremula*, *P. vittata* and a single *Deparia petersenii*. On a shaded rock wall were some *Dicksonia* sporelings. The total number of species we saw in the garden was 45.

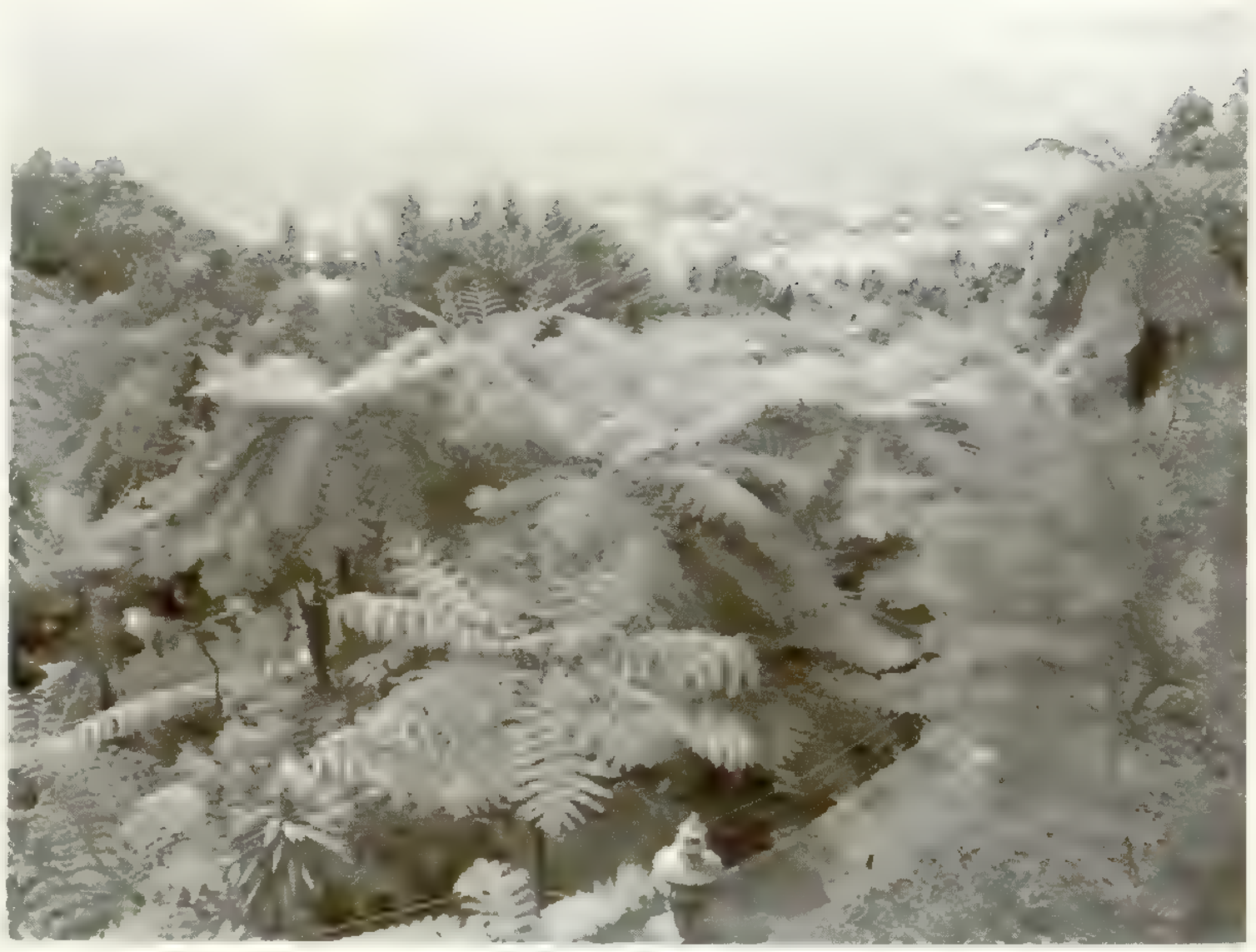


photo: Y. Golding

***Cyathea cooperi* at Monte Palace Tropical Garden, Madeira**

After lunch we did a walk on the southern Levada dos Tornos above Monte, but first we had to do some climbing. One of the first ferns we encountered was a pair of nice *Asplenium lolegnamense* on a dry-stone wall. We continued along the slope of a ravine covered in non-native *Eucalyptus* forest. After that a shaded rock-face gave us masses of *Adiantum reniforme*. The usual 'suspects', *Davallia canariensis*, *Polypodium macaronesicum*, *Pteridium aquilinum*, *Asplenium onopteris* and the maidenhairs, *Adiantum raddianum* and *A. capillus-veneris* were quickly added to our list. The best part of the levada for me was when we passed a waterfall behind which was the non-native *Adiantum raddianum* and surprisingly some *Pteris vittata*. Most members returned at this point because it became somewhat dangerous. On the slopes around the waterfall were some laurel trees and several well developed *Dryopteris aitoniana* and even a few *Woodwardia radicans* and *Diplazium caudatum*. The total species number was 23.

The day was rounded off at a local bar, where they had some fine ice-cream.

23 April – Lombo da Cima, Ribeiro Frio & Pico do Arieiro **Bryan & Gill Smith**

Another warm, sunny morning bode well for our ferning today. As on the 19th, we had to drive the scenic, but precarious and occasionally sheer-sided, north coast road towards Santana, encountering dark, dripping tunnels, potholes and hairpin bends. However, this time we headed inland and southwards at Faial. This was to prove a day for seeing many of the ferns that we newcomers to Madeira were gradually starting to recognise, but there were several new and exciting additions.

Our first stop was at Lombo da Cima where we clambered down a roadside wall, using stones set in the sheer face, to see lovely plants of *Asplenium aethiopicum* and *Doodia caudata*. Back on the road, a single frond of what appeared to be *Christella dentata* fooled most of us – but the experts pronounced it to be *Cyathea cooperi* – and indeed about 300 metres away we spotted the likely parent in a garden well above the road.

Our next stop was at Ribeiro Frio for a very pleasant walk along Levada do Furado after the ever-welcome tearoom break. We headed eastwards through a mixture of wooded glades, fern-covered banks and waterfalls, and eventually encountered our first and only plants of *Ophioglossum azoricum*, complete with maturing fertile spikes. The other rarity was a form of *Asplenium monanthes* (several plants) with fronds growing from what were clearly bulbils part way up the stipes. This is something we (Bryan and Gill) had never seen before even in those plants we grow in our own garden. Our lunch break on a bridge at the eastern end of this walk gave us an opportunity to feed and photograph the colourful local chaffinches.

Back at the cars we made a brief visit to the grounds of a fish farm to see several plants of *Asplenium hemionitis* under a garden hedge, before driving up Madeira's third highest peak

and highest road point, Pico do Arieiro (altitude 1,810 metres). The rocky terrain here yielded our goal for this site, just one plant of *A. septentrionale*. We also saw several isolated plants of *Polystichum falcinellum* and *Asplenium onopteris*, one looking very much like *A. adiantum-nigrum*. However, intrepid explorers scrambled further afield and Martin Rickard and Pat Acock spotted 20 or so more plants of *A. septentrionale* on a crag about 100 metres lower than the single plant the rest of us saw. We also found what could be the highest occurrence of *Christella dentata* – closely guarded by a lizard! However, it was the spectacular views well above cloud level that was the real bonus of this site. It was a pity that Bryan dropped and damaged our camera so could not record the sights. On the way back down, one car stopped at a spot about 200 metres along the road finding amongst other ferns in a gully a possible *Polystichum* × *maderense*.

All in all, another excellent ferning day and our tally of ferns amounted to 38 species.

24 April – Levada da Ribeira da Janela **Tim Pyner**

The Ribeira da Janela is situated in the north-west of the island, flowing northwards towards Porto Moniz. The levada runs along the western fringe of the valley at around 420 metres, affording good views of the surrounding scenery. The start of the walk was not promising, with stands of *Pteridium aquilinum* being the only fern amongst the invasive and dominating aliens *Eucalyptus globulus*, *Acacia mearnsii* and *A. melanoxylon*. However, as we walked farther into the valley the prospects improved and coinciding with the first appearance of the native laurel, *Laurus azorica*, the fern diversity escalated.

Naturalised alien ferns were a feature of the first part of the walk, with large colonies of *Doodia caudata* thriving on the steep bank above the levada despite being regularly strimmed, frequent plants of *Adiantum hispidulum*, *Selaginella kraussiana* and, more interestingly, several colonies of *Deparia petersenii*. The last species has only recently been found naturalised on Madeira and is slowly increasing; it is much more frequent in the Azores and may be expected to increase rapidly in the future. Another naturalised alien, *Adiantum raddianum*, was abundant wherever moisture seeped through the cliff-face but only small quantities of *A. capillus-veneris* were seen. In drier places large colonies of *A. reniforme* clung onto bare rock, often tucked under small overhangs. The wonderful *Diplazium caudatum* was also abundant, occasionally occurring in drier, sunnier spots as well as the normal shady, wet gullies. *Woodwardia radicans* and *Pteris incompleta* were, as usual, almost constant associates. One of the highlights of this walk was the endemic *Arachmiodes webbianum*. This can form large patches of creeping rhizomes with abundant glossy fronds. The unfurling croziers are also distinctive, like reversed *Polystichum* fiddleheads.

We finally reached our turnaround point at the tunnel at Ribeira da Quebrada where the target species of the walk would hopefully be found. In this we were successful and a single large plant of *Polystichum drepanum* was spotted by hawk-eyed Patrick on the steep cliff wall across the gorge. He knew that a plant had been seen on earlier occasions but had failed to re-find the plant on previous visits. It is remarkable that this plant can be so rare in the wild yet be easily propagated and grown in cultivation. Surely colonies of this beautiful fern occur higher on the inaccessible cliff-faces with only the odd plant establishing lower down to thrill the intrepid fern hunter. The three plants seen during the week were all large healthy individuals that were visible but not easily reached, so hopefully they will remain to be admired by the knowledgeable few for many years to come.

Following our picnic lunch a few hardy pteridologists remained behind searching the steep walls of a boulder and log-strewn gorge for signs of *P. drepanum* but to no avail. However, there were many fronds of *Trichomanes speciosum*, some looking very lush. Martin spotted a single young plant of *Cyathea cooperi*, perhaps an early signal of future problems.

Returning the way we had come and admiring the views, we noted that three of the four species of native laurel grew in close proximity – *Laurus azorica*, *Apollonias barbujana*

and the rare *Persea indica* were all present. The *Persea* in particular was visible across the valley in large numbers in deep gulleys; the old leaves are reddish just before falling, helping the trees to stand out from the surrounding dark green laurisilva. The importance of these ancient laurel forests to the long term existence of the native flora and fauna cannot be overstated. One only has to make a brief comparison of the contents of the endemic laurel and *Erica* forests to that of the introduced pine, eucalypt and acacia woodlands to realise the enormous negative impact these introductions have made on the island's flora.

Following well deserved refreshments in Porto Moniz we stopped off at the coastal village of Seixal during the return to our hotel to look for *Asplenium marinum*. This we found on natural rock after some searching. The alternative habitat of man-made harbour walls had been relinquished to *Cyrtomium falcatum*. We finally returned to the hotel after another immensely satisfying day.

Conclusion **Pat Acock**

On the final day people dispersed to the airport at different times. Some late leavers visited the caves above São Vicente and were surprised to see *Adiantum capillus-veneris* and even more surprised to see *Asplenium hemionitis* growing underground in the meagre light of the caves' artificial light.

We had based ourselves in São Vicente for easy access to both the north and west of the island, but with the road development on the island over the last ten years, we found that most places are now easily accessible from anywhere on the island. The group seemed to enjoy the excursion immensely and we added a number of new locality records for the ferns and flowering plants of the island.

SOUTH WALES – 14-15 June Roger Golding (Saturday) & Tim Pyner (Sunday)

photo: R. Golding

Debating *Dryopteris affinis*, Melincourt
Alison Evans, Tim Pyner, Alison Paul, Ken Trewren, Howard Matthews (*behind*), Susan Lewis

Seventeen people met at the car park below Melincourt waterfall (22/826016), near Resolven, north-east of Neath (Neath Port Talbot). Starting along the path towards the falls we were soon mired in the inevitable discussions over the *Dryopteris affinis* group and their varieties – a few of us were deciding we were looking at *D. cambrensis* until Ken Trewren caught up with us and told us it was *D. affinis* subsp. *paleaceolobata*. It was a good thing Ken was with us, as there was a bewildering variety of *D. affinis* and *D. borreri* types, including the form of *affinis* currently known simply as 'Torc', after the area in Ireland where it was first found. Outside Ireland it has so far been found in North and Central Wales, and this was its first known South Wales locality.

The waterfall itself was impressive and it was possible to walk along behind the fall. There we found *Osmunda regalis*, unusually growing out of the vertical rock-face. Nearby, after a bit of searching, Ken found the gametophyte of *Trichomanes speciosum*. The ferns found

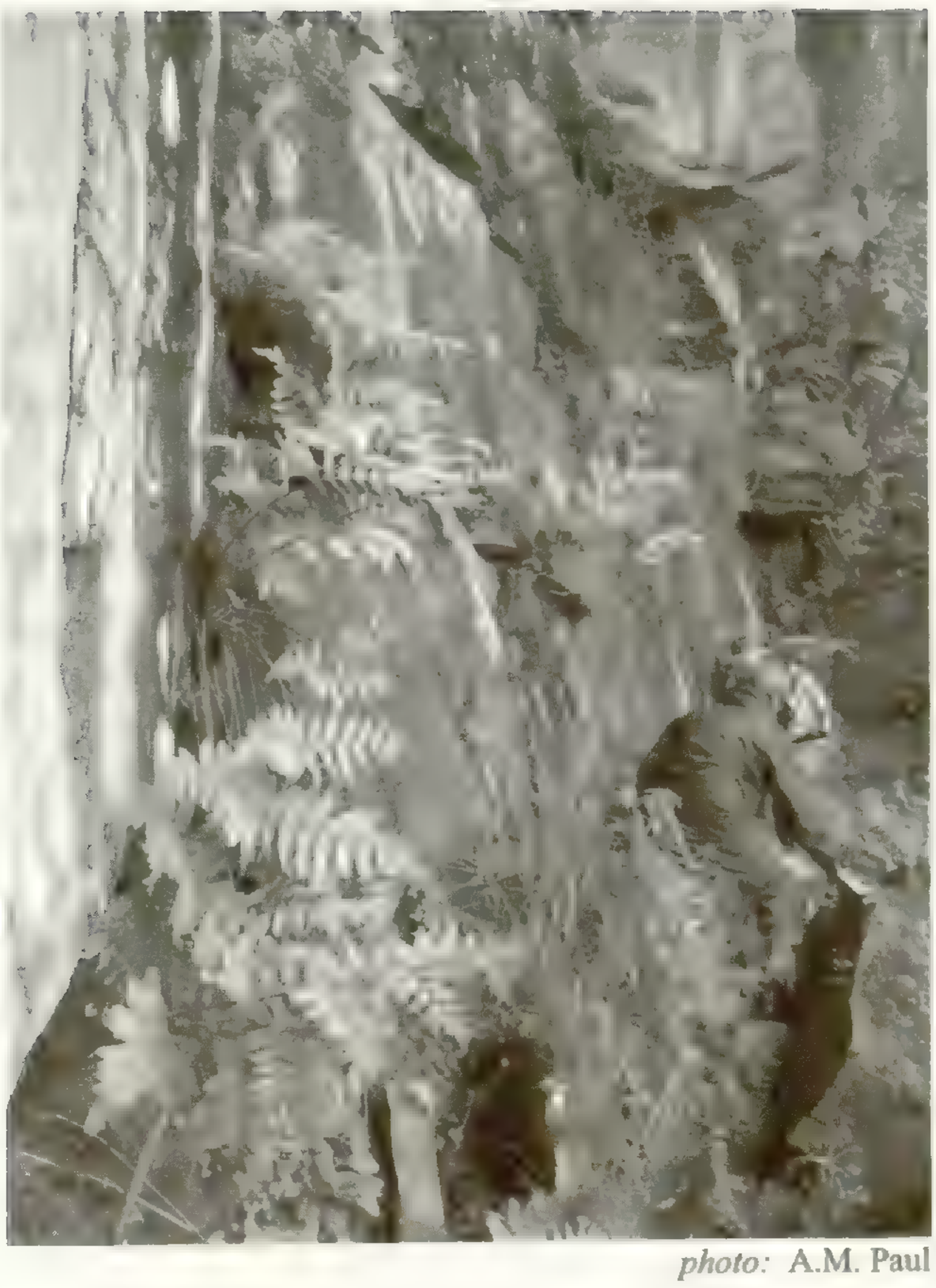


photo: A.M. Paul

***Osmunda regalis*, Melincourt waterfall**

reflected the mainly acidic nature of the woods, including *Oreopteris limbosperma*, *Blechnum spicant* and *Phegopteris connectilis*, although *Asplenium scolopendrium* was also relatively frequent, sometimes in close proximity to the *B. spicant*. *Athyrium filix-femina*, *Pteridium aquilinum*, *Dryopteris dilatata*, *Polystichum setiferum*, *Polypodium vulgare* and *Asplenium trichomanes* were also noted.

After lunch we moved north to the next site, Henrhyd Falls (22/850119) near Coelbren (Powys). The ferns here reflected a rather more mixed environment, with acidic species dominating the humus over underlying basic rock and featuring such species as *Cystopteris fragilis*, *Asplenium viride*, *Oreopteris limbosperma*, *Phegopteris connectilis*, *Gymnocarpium dryopteris*, *Polystichum aculeatum* and *P. setiferum*. Once again, *Dryopteris affinis* and *D. borreri* types were much in evidence, including a very foliose form of *D. borreri*. Once again, the waterfall featured *Osmunda regalis* growing horizontally from the rock-faces. The star find here was *Polystichum* × *bicknellii*, the hybrid between *P. setiferum* and *P. aculeatum*; two plants were seen, both exhibiting the large size and intermediate frond and pinnule morphology of the hybrid, although it was too early in the year for confirmation by checking the spores.

Most of the group stopped off for tea and cakes, before moving on to Ogaf Ffynnon Ddu (22/866160) (Powys), a National Nature Reserve. Here Pat had negotiated permission for us to enter an area of limestone pavement and quarry spoil heaps that had been enclosed to prevent grazing. Regeneration was taking place, and we saw many of the typical limestone pavement ferns including *Asplenium viride*, *A. ruta-muraria*, *A. scolopendrium*, *Polystichum aculeatum* and *Cystopteris fragilis*. *Dryopteris filix-mas* and *D. borreri* were also present but despite a £5 reward on offer

photo: A.M. Paul

Limestone pavement, Ogaf Ffynnon Ddu NNR

Pat Acock, Roger Golding, Susan Lewis

from Pat for a sighting of *Gymnocarpium robertianum*, none was found. On limestone scree at the abandoned quarry workings lower down, we found much *Asplenium trichomanes* subsp. *quadrivalens*, and two plants of *A. ceterach* with the rather crenate margins often found in plants in south-western areas of the country.

On Sunday the group congregated at the entrance of Carmel NNR (22/603165; Carmarthenshire), a disused limestone quarry. The floor of the quarry contained a variety of horsetails; *Equisetum arvense*, *E. palustre* and *E. fluviatile* were all present. Despite searching for *E. variegatum*, recorded here previously, we had no luck. Several odd looking stems were carefully examined by Pat for signs of hybridity but turned out to be just *E. palustre*. The usual common ferns were found amongst the scrubbed over areas: *Dryopteris filix-mas*, *D. dilatata*, *Athyrium filix-femina* and very luxuriant *Asplenium scolopendrium*, plus *A. trichomanes* subsp. *quadrivalens* on rocks. Of more interest were the varied examples of the *Dryopteris affinis* aggregate. Both *D. affinis* subsp. *affinis* and *D. borreri* were present, the latter with apparently two additional morphotypes evident, 'insolens' and 'foliosum'. Walking upwards around the quarry we spotted some good examples of the distinctive *D. affinis* subsp. *paleaceolobata*.

Upon reaching the area above the quarry we were surprised to see many tufts of *Asplenium ruta-muraria* colonising the bare limestone rock. Some of these plants were quite large and for those of us from the south-east it was a change seeing wall-rue in a (semi) natural setting.

On the way back, following a circular route around the quarry we started to notice *Polystichum aculeatum* and *P. setiferum*. Looking out for possible hybrids we came across several large plants that matched the description of *P.* × *bicknellii*. These were later confirmed under the microscope. Somewhat surprisingly a few *Blechnum spicant* were noticed on damp banks that must have become less calcareous through leaching. Small quantities of both *Polypodium interjectum* and *P. vulgare* were found as was one plant of *Dryopteris carthusiana*.

Following lunch we made our way to Glynhir Waterfall (22/641151), east of Llandybie (Carmarthenshire). A narrow track was followed down to the Afon Llwchwr. *Dryopteris dilatata*, *D. affinis* subsp. *affinis* and subsp. *paleaceolobata*, *D. borreri*, *Blechnum spicant*, *Asplenium scolopendrium*, *Athyrium filix-femina* and *Polystichum setiferum* were all growing luxuriantly. As we approached the waterfall *P. aculeatum* and *Cystopteris fragilis* grew on the wet walls of the ravine. *Dryopteris aemula* had been recorded here in the past and we managed to find two plants clinging to the cliff-face. Returning to the cars, *Asplenium adiantum-nigrum* was found on the bank of the track.

After a quick stop for refreshments we made our way up to Carreg Cennen Castle (22/667190; Carmarthenshire), seeing *Dryopteris dilatata*, *D. filix-mas*, *Asplenium ruta-muraria*, *Cystopteris fragilis*, *Asplenium scolopendrium* and *Pteridium aquilinum* on the way up to the castle walls. On the castle walls we saw an *Asplenium trichomanes* subspecies that has yet to be named with a form close to *A. trichomanes* subsp. *pachyrachis*, and one colony of *A. ceterach*. On a steep rocky ledge just beyond the other side of the castle Martin Rickard found a *Polypodium cambricum* variety.

On Monday people dispersed in different directions, but the trip having been advertised wrongly as a Gower meeting, six members decided to make their way to Mill Wood near Penrice (21/493882; Swansea unitary authority) where many common ferns were found in pleasant surroundings. We then moved on to Oxwich NNR in search of adder's tongue; the very pleasant beach yielded few ferns but beautiful flowers in a very compelling setting.

Later in the week Roger Golding returned to Carmel NNR and after careful searching managed to find the *Equisetum variegatum* that had eluded the rest of the group.

DUMFRIES & GALLOWAY, SCOTLAND – 26-27 July

Frank McGavigan

photo: H. Hawker

Kirkbean, Dumfries & Galloway

Bryan Smith, Frank Katzer, Lindsey Holleworth, Bridget Laue, Paul Sharp, Ann Robbins, Gill Smith, Frank McGavigan (*behind*), Ken Trewren, Paul Ripley, David Hawker, Roland Ennos, Sandy Strang, Yvonne Golding, Mike Canaway, Bruce Brown, Alison Evans, Alec Greening, Linda Greening, Jonathan Crowe, Ann Stark, Janet Dyer, Roger Golding, Pat Acock, Adrian Dyer

In glorious weather 26 of us gathered to explore a number of different habitats in a relatively small corner of Kirkcudbrightshire (now part of Dumfries and Galloway), south of Dumfries. Our guide was Adrian Dyer who had brought groups of students here on field trips in the past. With his detailed notes in hand we knew what to expect, but in the decade or more since he had last been here some species had inevitably disappeared. However, with so many experts in our group it was clear that we would also record new finds.

Kirkbean Glen (entrance at 25/977592). This steep-sided wooded ravine has a mixture of soil types, allowing a wide range of ferns to flourish. Even before we reached the glen proper we were recording *Asplenium trichomanes*, *A. ruta-muraria*, *A. adiantum-nigrum* and *Polypodium interjectum* on old walls. Once in the wood we very quickly ticked off *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis*, *D. borreri* (with Ken Trewren with us there was no way we were going to get away with lumping them all as *affinis* agg.), *D. dilatata*, *D. filix-mas*, *Polypodium vulgare*, *Polystichum setiferum*, *Pteridium aquilinum*, and at the bottom of the gorge, *Asplenium scolopendrium*. There was no sign of the *Cystopteris fragilis*, *Gymnocarpium dryopteris* or *Phegopteris connectilis* that had been reported from here in the past. Perhaps the pathway that the local authority constructed round the glen, or erosion on the steep sides of the ravine, had destroyed their habitat. On the other

photo: R. Golding

Kirkbean Glen. Pat Acock with a large *Dryopteris* × *complexa*

hand, Ken, who ventured with a few other intrepid explorers down to the bottom of the gorge, discovered *Trichomanes speciosum* gametophytes in several places among the overhanging rocks. On higher ground he verified finds of *Dryopteris* × *complexa* and (later) of *Polystichum* × *bicknellii*. With 17 taxa in the bag we deserved our lunch in the nearby beautiful village of New Abbey, where most of us took a few minutes to view *Matteuccia struthiopteris*, which has been flourishing there on a roadside verge (25/9603 6637) for many years.

Preston Merse (25/9455). In contrast to the morning, Saturday afternoon was spent on more open, flatter ground, firstly at Preston Merse, effectively a fen, which is one of only two known sites in Scotland for *Thelypteris palustris*. I had warned participants to wear wellingtons but in some cases even these were not enough protection as I foolishly led the party to the site by the wettest possible way, which involved negotiating deep, squelchy mud, and pools and streams too wide to jump. But this route enabled us to find *Equisetum arvense*, *E. fluviatile*, *E. palustre*, *E. sylvaticum* and *E.* × *litorale*. We also noted *Athyrium filix-femina*, *Dryopteris dilatata*, and *D. filix-mas*, before eventually reaching the *Thelypteris*. Good to see it flourishing, but not exactly an exciting fern. We found a drier route back, much to everyone's relief.

Southerness (25/9754). A short drive took us to an area on the edge of Southerness Golf Course (25/971547) where Adrian and his students had found *Ophioglossum vulgatum*, but recces in 2007 and again in May 2008 had found no sign of it. So we were not hopeful, and despite a police-type sweep of the ground we could find no trace of this elusive fern. David Hawker, the local vice-county recorder who had joined us for the day, promised to ask the greenkeeper to change the grass-cutting regime in the hope that by reducing the competition the adder's tongue would reappear. We did note in the surrounding area, however, *Dryopteris carthusiana*, *D. dilatata*, and their hybrid, *D.* × *deweveri*, along with *Athyrium filix-femina*, *Equisetum arvense* and *Pteridium aquilinum*.

Rockcliffe (25/8453). Our final visit on Saturday was to a colony of *Asplenium ceterach* on a wall on the upper track going north-west out of Rockcliffe village. About half of the plants were still desiccated as a result of the long dry spell earlier in the summer while the other half had been rejuvenated by recent rain, so it was a good lesson in the resurrection properties of this fern. On the way we noted other wall ferns: *Asplenium adiantum-nigrum*, *A. ruta-muraria*, *A. scolopendrium*, *A. trichomanes*, and both *Polypodium interjectum* and *P. vulgare* (though personally I find these two increasingly difficult to tell apart). On the ground were *Dryopteris affinis*, *D. borreri*, *D. dilatata*, *D. filix-mas* and *Pteridium aquilinum*. That evening we had a communal meal at the Clonyard House Hotel, a good opportunity to talk ferns and generally put the world to rights.

Sandyhills (car park at 25/891553). Sunday morning saw us examining the coastal rocks and cliffs east of Sandyhills, only accessible at low tide. We found *Asplenium marinum* along with *A. adiantum-nigrum* at 25/8989 5534, and, in the steep gullies cutting into the cliffs, *A. scolopendrium*, *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis*, *D. borreri*, *D. dilatata*, *D. filix-mas*, *Pteridium aquilinum*, *Polystichum setiferum* and at 25/9057 5532 *P. aculeatum* with their hybrid *P.* × *bicknellii* close-by. I had hoped to find *Polypodium cambricum*, as all the polypodies and their hybrids have been recorded from the Kirkcudbrightshire coast, but every one located was declared to be *P. interjectum*. Ken again found *Trichomanes speciosum* gametophytes, in a cave at 25/8988 5533. We had lunch at the Stuffed Olive café in Colvend where the owner explained that at her farm home there were "rare ferns" on a barn wall. We promised to visit later.

Clawbelly Hill (25/8860). But first we were due to visit yet another habitat, the open, acidic slopes of Clawbelly Hill (used as rough grazing in the winter but left fallow in the summer). Here, as you would expect, we found *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis*, *D. carthusiana*, *D. dilatata*, and *Oreopteris limbosperma* (which had, for the first time for me, a definite lemon scent), with of course the ever-present bracken. But the main reason for being here was to visit an *Osmunda regalis* site (25/8834 6075),

originally one plant but now two clumps. Their only threat was the possibility of being shaded out by a self-sown rhododendron plant, which Alan Crichton, the local farmer who had accompanied us, promptly pruned severely with his knife.

Clonyard Farm (25/910578). Our final (unscheduled) stop was to the farm where we had been promised "rare ferns" on the inside wall of a barn. There were several plants of what appeared to be *Asplenium trichomanes* subsp. *pachyrachis*, and, certainly the fronds hugged the surface of the wall in the way *pachyrachis* is supposed to do. (Pat took a frond for verification by the NHM, where it was declared to be a known, but as yet unnamed, subspecies. It is in the queue for DNA analysis.) Back at the farm we found *Polypodium interjectum* and some red-stemmed *Athyrium*.

We ended the weekend with a barbecue among the sea lavender on Rockcliffe beach, splendidly organised by Ann Robbins. What better way to finish a wonderful field trip, blessed by glorious weather and lots of interesting ferns?

SWANAGE, ISLE OF PURBECK, DORSET – 20-21 September

Robin Walls (Saturday) & Graham Ackers (Sunday)

Saturday morning was sunny, the weather forecast good and even the name of the meeting place augured well. So what could go wrong? Thanks largely to Ted Pratt's planning and leadership, nothing did and the 19 people who accumulated in Bon Accord Road had a lovely day with some exciting finds.

We organised ourselves into a minimum number of cars to travel the short distance to Durlston Country Park (40/031773) where we started by hunting for *Ophioglossum vulgatum* in rough grassland. Plants were still visible late in the season, in fact more so as they were yellowing and sorrel appeared to be absent from the field. Along the margins were a few small *Equisetum telmateia*, but we were to see more impressive specimens at the end of the weekend.

During the walk to the sea we encountered most of the usual local woodland ferns – *Asplenium scolopendrium*, *Polystichum setiferum*, *Dryopteris filix-mas*, *D. dilatata* – and one *D. affinis* agg. with the inevitable discussion. The conclusion was 'more *D. borreri* than *affinis*'. The objective of the walk was to see a fine colony of *Asplenium marinum* by looking over a wall with our backs to the splendid view of cliffs and seabirds. The wall was constructed to access a quarry (Tilly Whim caves) and the gate was locked. Ted had enquired about a key only to learn that the lock was rusted beyond repair. This did not deter the adventurous pteridologists and several agile members found ways to gain a better view. Rather bizarrely, accompanying the spleenwort were several plants of sea aster about 40 metres above their normal home in saltmarsh subject to occasional tidal inundation.

BPS meetings are not noted for missing lunch and on this occasion we enjoyed the food in the café claiming the best view in Dorset. Sitting in the sunshine with the whole of Poole Bay in front of you and a hazy view of the Needles beyond Old Harry was certainly no hardship.

We returned to our cars, finding that the walls nearby supported wall rue (*Asplenium ruta-muraria*) and a very small polypody. After a quick stop to see rustyback (*A. ceterach*) on the wall in the next road, we went to Hartland Moor (30 941842) for a decidedly moister and more energetic excursion. Ted explained that we were to scour a valley mire for *Dryopteris* × *deweveri* (*D. carthusiana* × *D. dilatata*) and divided us into four teams, each having a leader who admitted to being able to recognise the hybrid and a person with a GPS. We were in for a walk and to make it interesting on the way we looked for a scarce grass *Deschampsia setacea* and a smooth snake (both unsuccessfully) but as consolation found large plants of *Osmunda regalis*. Dorset heath (*Erica ciliaris*) was plentiful and well in flower to distract us, but we managed to spot *Blechnum spicant*, *Athyrium filix-femina*, rather leathery *Dryopteris filix-mas* and a few *Osmunda* sporelings.

My party arrived at a pond (30/947848) noted for *Pilularia globulifera* and after a little searching found some, although not as much as had been recorded in a report from 1990 that Alison Paul had thoughtfully brought with her. We did find two new records of scarce flowering plants: *Potamogeton obtusifolia* and *Callitriche brutia.* Just as we were leaving the pond, Sue Dockerill spotted a better colony of *Pilularia*, about a square metre in extent.

So to the search. Although the mire is located in typical heathland it is flushed by relatively base-rich water and has a wide range of species. So, an exciting place to be, but structurally it is dominated by *Molinia* tussocks and hard work. *Dryopteris carthusiana* and *D. dilatata* were present and my team found five possible hybrids and collected fronds from three of them. Unfortunately very few plants had sori and most were rather young. Most of the fronds that did have spores later proved to be *D. carthusiana* but at least one was confirmed by Roger and Alison to be D. × *deweveri*. As if this was not exciting enough, Sue topped her earlier success by finding a substantial stand of *Thelypteris palustris*. This was a new record for the site and a considerable distance from the next known site, which Ted had been keeping for the finale of the meeting on the next day! For the record, the other ferns we recorded in the fen were *Dryopteris filix-mas*, *Asplenium scolopendrium*, *Athyrium filix-femina* and *Osmunda regalis*. Amongst the wet heathland along the sides of the mire were stands of marsh gentians to delight the members with inadequate boots or enough sense to decline the dubious pleasures of searching *Molinia* mires. Overall, a good haul for a well botanised place – as Ted told us, the first NNR to be declared.

In the evening we entertained Ted and his wife Jo to dinner at a local restaurant.

Another wonderfully sunny day on Sunday saw us heading for the National Trust car park at the northern extremity of Studland Heath just before the Sandbanks chain ferry (40/036865). As our weekend leader had ecclesiastical duties that morning, armed with location information Pat Acock, helped by Robin Walls, led us to our first site (40/038860). Nestling amongst sand-dunes was a large circular damp depression hosting a multitude of bright green ribbons of foliage – a very large stand of marsh clubmoss, *Lycopodiella inundata*. This splendid sight occupied us for some time with many members of the party prostrating themselves for study and photography. However, once our knees had become thoroughly soaked, we returned to the car park where Ted Pratt awaited us.

photo: A.M. Paul

***Lycopodiella inundata* site, Studland Heath, Dorset**
Julian Reed, Graham Ackers, Andrew Leonard, Peter Tindley, Jonathan Crowe, Robin Walls, Brian & Sue Dockerill, Christine Mullins

Returning south in our cars, we stopped to observe a roadside polypod colony growing right beside a parked camper van. The family owners, who were sitting out beside their vehicle, observed our intrusion with a mixture of bewilderment, amusement and finally relief on our departure! The fronds were rather small and we were told that they were *Polypodium* × *mantoniae* – this I had to accept on trust because I have problems identifying polypod species, never mind hybrids! Continuing south we parked at the main Studland

National Trust car park with its visitor centre, shop and café (40/033835). From there we walked a short distance north into woodland harbouring *Pteridium aquilinum*, *Dryopteris dilatata*, *D. filix-mas* and *D. borreri*. However, the main interest was a large colony of *Dryopteris affinis* subsp. *affinis*. These plants were obviously very old, with chunky rhizomes, some dead, some creeping and some erect giving the impression of a small tree fern forest. Furthermore, the fronds had been severely chewed (by Sika deer we were told), adding further to this atmospherically bizarre scene. Although I felt this to be a potential conservation issue, Ted informed us that the deer's foraging did not seem to be putting the plants at risk, but for how long I wonder?

photo: J.P. Crowe

Discussing *Dryopteris affinis* agg., Studland
Bryan Smith, Robin Walls, Pamela Simpson, Ted Pratt, Alison Paul, Christine Mullins

Following lunch, we walked again from the car park to the nearest accessible shore of Little Sea (40/033841). Wading in the shallows we found some plants of *Isoetes echinospora*, but rather more of the superficially similar *Littorella uniflora*. Ted helped us to differentiate the two.

We then drove to visit some disused clay mines (30/952826) at Norden Farm (note however, that this site is on private land). Growing on the infilled clay pits were pioneering silver birch plants creating lightly shaded woodland. On a previous visit, Ted had provisionally identified a plant of *Equisetum* × *litorale*, but despite intensive searching this hybrid could not be re-located. However, one of its parents, *E. arvense* was common. *E. palustre* was also found, including at least one plant of var. *polystachyon*. Within the clay mines area *E. telmateia* occurred in wet flushes and moving further south onto the lower wooded slopes of the Purbeck Hills we found *Asplenium scolopendrium*, *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris borreri*, *D. dilatata*, *D. filix-mas* and *Polystichum setiferum* – an interesting mix of calcicole and calcifuge species.

Our final site of the day was The Moors near Arne (in the region of 30/945870 - but note that this again is private land and should not be visited without permission). En route through wet ground we encountered *Equisetum fluviatile*. As the ground became even wetter, we entered a woodland copse of sallow and birch where *Thelypteris palustris* grew amongst hostile tussocks of the saw sedge, *Carex paniculata*. The marsh fern population was fairly substantial and we were pleased to note at least one fertile plant, rather unusual in this species. Other ferns noted within the copse were *Blechnum spicant*, *Dryopteris borreri*, *D. dilatata* and *D. filix-mas*.

This day of enjoyable concentrated ferning ended with the usual farewells, and we were delighted to be able to show our appreciation to our leader Rev. Edward Pratt for his planning and execution of an excellent programme. His deep and wide knowledge of the British flora is impressive and his detailed knowledge of the Purbeck area was invaluable. It is worth mentioning that this year (2008) he has published a book *The Wild Flowers of the Isle of Purbeck, Brownsea and Sandbanks* (Brambleby Books). Despite its title this does include ferns, and provides a comprehensive guide to botanising the area - thoroughly recommended!

LECTURE MEETINGS AND DAY VISITS

AGM & SPRING MEETING, NATURAL HISTORY MUSEUM, LONDON - 5 April

Adrian Dyer

The AGM and associated programme of talks attracted a good attendance of over 40 members. After tea and coffee participants settled down to three accounts of overseas excursions. Alan Ogden presented a selection of photographs that gave a flavour of the extensive BPS field meeting to Texas in October 2007. He began by showing slides of the propagation facilities at Casa Flora nursery, which each year distributes 16 million young ferns worldwide. Alan clearly enjoyed his introduction to a range of habitats and an abundance of fern species. Having lost his notebook, Alan was unable to put a name to some of the ferns he showed and this prompted some audience participation, which provided up to three different identifications for each fern. Memorable photographs included *Anemia mexicana*, some impressively large botrychiums and several xeric species of arid habitats. These included the common *Pleopeltis polypodioides*, the so-called 'resurrection fern' and *Arachniodes*, *Notholaena*, *Cheilanthes* and *Pellaea* species. Many of these curl up their fronds in dry conditions to expose their undersides, protected by hairs or scales like our rustyback, *Asplenium ceterach*. This is presumably an adaptation to desiccation by reducing water loss.

We were then entertained by Michael Hayward with an account of a solo visit to look at ferns in New Zealand. A series of photographs of the high standard that we have come to expect from him provided, for those who went on the BPS excursion to New Zealand in 2000, a reminder of that country's pteridological treasures and, for those of us who have not been there, a glimpse of the fern flora to whet the appetite. In an almost rain-free four weeks in February 2007, Michael managed to see and identify about 120 species in a range of locations in both North and South Island including, on the Mahia peninsula, a large, untouched forest of Nikau palms and native hardwoods that harboured many fern species. As to be expected, tree ferns, blechnums and filmy ferns were much to the fore. Worth special mention were the curious *Blechnum filiforme* in regenerating woodland on Waiheke Island, which looked like a completely different species when it climbed up trees, *Dicksonia lanata* and *Blechnum fraseri* in the Kauri forests of North Island and *B. obtusatum* growing in sand at the top of the beach at Cape Foulwind, South Island.

The morning finished with a slide-show by Martin Rickard, listed in the programme as 'Réunion Excursion' but in reality a more wide-ranging tour of 'ferns with trunks', not all of which are *Cyathea* or *Dicksonia* species. We saw *Blotiella pubescens* and *Amauropelta* sp. as well as *Cyathea borbonica* (endemic to Réunion), *C. excelsa* and *C. glauca*. On La Réunion, these three *Cyathea* species share a remarkable feature not normally seen in tree-ferns: they regularly branch. Moreover, these branches become detached at the base during typhoons and, after falling to the forest floor, form roots and continue to produce fronds, becoming established as new plants. The branches are effectively vegetatively produced 'bulbils'. To what extent the production of detachable branches is the result of environmental factors is not known. It would seem remarkable if this was the only place in the world where the conditions produce this response. There is an article on this interesting aspect of tree-fern biology in the 2008 *Pteridologist*. Then Martin took us on a tour of blechnums with trunks. On Réunion, *Blechnum tabulare* becomes tree-like with tall trunks, even though in South Africa the same species has almost no trunk. *B. palmiforme* (Tristan da Cunha), *B. magellanicum* (Chile), *B. cycadifolium* (Juan Fernandez Islands, Chile) and *B. buchtienii* (Costa Rica) are other species that form distinct trunks.

Following the talks, a generous allowance of two hours allowed us to visit the Museum galleries and shop as well as to talk to fellow fern enthusiasts and make purchases from the Book Sales display, brought by Yvonne Golding in Frank Katzer's absence, and the Merchandise stall, brought by Bryan and Gill Smith. At 2pm, the President, Robert Sykes,

made a prompt start with the AGM. Because, for the first time, the Reports of the Officers and Committee Appointees as well as the examined Accounts had been printed in the *Bulletin* in advance of the meeting, business was conducted much more expeditiously than in recent years, and the meeting took little more than an hour. Reading through the Reports reminded me once again of the considerable amount of work required to maintain the Society's many and diverse activities and of the thanks due by all the members to the volunteers who contribute their skills and time to carry them out. I hope they realise how much their efforts are appreciated. The full Minutes of the AGM are to be found elsewhere in this *Bulletin*. The AGM finished on a happy note with the presentation of Awards. Chris Fraser-Jenkins and James Merryweather shared the first J.W. Dyce Award for the best contribution in a BPS publication during the previous year. Outstanding Service Awards were then given to James Merryweather, for ten years of editing the *Pteridologist*, and to Pat Acock, for at least ten years as Meetings Secretary, not forgetting all the many other ways he helps the Society to function. Pat was present to receive his certificate and engraved glass tumbler from the President.

photo: A.C. Wardlaw

Pat Acock (*right*) **receiving his Outstanding Service Award from President Robert Sykes, AGM 2008**

Rob Cooke then presented a thought-provoking lecture on 'Factors affecting fern distribution'. He initially pointed out the limitations of the fern distribution maps that we all consult. They do not convey anything about abundance and, unlike some maps of intensively studied animal species, they do not show where a species is absent, merely where it has not been recorded. Factors determining the distribution of a species include soil characteristics, geology and land use as well as climate but only in a few rare species is collecting a possible additional factor. Climate is a major influence in producing a particular distribution pattern, such as the south- and west-orientated distribution of the 'Atlantic' species *Dryopteris aemula*, *Hymenophyllum tunbrigense* and *Trichomanes speciosum*, but interruptions in the potential distribution result from the absence of suitable habitats and, for example, cause the disjunct localities for these species in the Weald of south-east England. In the case of the 'Continental' species *Thelypteris palustris*, the concentration of sites in East Anglia results from the anthropogenic loss of habitat when wet mineral soils elsewhere in its climatically-determined British range are taken over by agriculture. The underlying significance of climate means that fern species are liable to be affected by climate change, now generally agreed to be real even if the causes are still debated. Climate models predict drier summers and autumns and wetter winters as average temperatures rise. Although the responses will be slower than for animals, particularly birds and flying insects, distribution boundaries of ferns will move to higher latitudes and altitudes. This may be a threat to rare alpine species such as *Woodsia* and those in localised and specialised habitats such as *Lycopodiella inundata*, but may cause some southern and lowland species to become more common or widespread within Britain. A clear picture of these changes will only emerge if there is close monitoring of existing populations, including quantitative records, and searches made for newly-colonised populations. The BPS has a role to play in targeted recording of this type.

The day's programme finished with an unexpected bonus, a talk on 'The jumping spores of the Jurassic' by Peter Hovenkamp (Leiden) who happened to be visiting the NHM. Peter reported an investigation of the spore dispersal mechanism of *Angiopteris*, an 'ancient' Eusporangiate fern with a fossil history traceable back to the Jurassic. As the ripe sporangia, which do not have the thickened annulus of the 'modern' Leptosporangiate ferns, dry out and split, the spores within can be seen to move and even jump out of the capsule. They can be projected for up to four millimetres, a distance that would be sufficient to carry them away from the stationary air layer at the frond surface and into the moving air currents above for wider dispersal. Similar movements occur in spores that have been artificially removed from the sporangium and allowed to dry out, so it can be concluded that the movement is generated by the spores themselves. The spores are spherical, with a perispore surrounding the exospore layer of the wall. Close examination of the spores as they dry out reveals that as the spore volume reduces due to water loss, a point is reached when the exospore suddenly buckles inwards, pulling away from the spherical perispore, which remains rigid. This sudden cavitation, producing a vacuum 'bubble' between the two wall layers that can be seen under a microscope, causes the twitching and jumping of the spores. This can only happen once in each spore because the adhesion between the layers is not restored on re-hydration. This remarkable mechanism can now be added to the list of known spore dispersal mechanisms, almost all of which, except in the case of *Equisetum*, depend on activity in surrounding tissues rather than in the spore itself. This interesting account prompted me to wonder whether a similar mechanism occurs in our native *Osmunda regalis*, another ancient Eusporangiate fern with round spores. Something to look for in June.

Tea and cakes brought the meeting to an end, followed by the rapid, and in some cases long-distance, dispersal (no jumping observed) of the participants. Thanks are due to Pat Acock and Alison Paul for the interesting programme and smooth running of the local arrangements.

'FOCUS ON SPLEENWORTS', NATURAL HISTORY MUSEUM, LONDON – 1 November

John Edgington

Ask pteridologists to vote for their favourite family, and the hot money will be on Aspleniaceae. No surprise, then, that 'Focus on Spleenworts' attracted over 40 members who, after passing through throngs of Museum visitors to the calm of the Palaeontology Department, enjoyed an absorbing day discussing this large, morphologically varied and ecologically diverse group.

As Harald Schneider reminded us in his overview, the Aspleniaceae have long puzzled taxonomists; the family, with its distinctive sori and clathrate scales, is recognisable enough, but reticulate evolution and promiscuous speciation via polyploidy and chromosome doubling have left the traditional morphological boundaries between genera hopelessly blurred. Tryon and Tryon (*Ferns and allied plants*, 1982) separated the large genus *Asplenium* from half-a-dozen small satellite genera, while a few years later Kramer and Viane (Aspleniaceae: in *The families and genera of vascular plants. Vol. 1: Pteridophytes and Gymnosperms*, 1990) lumped all 700 species into a single genus. Noting that a scheme such as Tryon and Tryon's entails the (now disfavoured) concept of intergeneric hybrids, Harald outlined the new classification that is emerging from the research programme he leads at the NHM. By comparing DNA sequences from different species, and requiring the emergent groups to be monophyletic (that is, comprise a common ancestor species and all its descendents), the team has drawn up a phylogenetic tree showing the evolutionary relationships between more than 200 species.

At the base of the tree, first to split from the ancestral lineage, is *Hemidictyum marginatum* (chromosome number $x = 31$) and the small genus *Hymenasplenium*, distinguished by its long flattened rhizomes. Subsequent episodes of differentiation produced the remaining 200+ species, grouped into some twenty to thirty monophyletic clades, all with basal chromosome number $n = 36$; these include *Asplenium marinum* – the type of the genus in a

group by itself, the *adiantum-nigrum* group, the *Pleurosorus* clade and many others. Temperate and tropical species generally segregate, showing that their geographical separation is of great antiquity. The recognition of Tryon and Tryon's satellite genera renders *Asplenium* paraphyletic. As Harald remarked, to recognise each clade as a separate genus would re-open the problem of intergeneric hybridity, at least for the temperate species; the solution proposed is to lump them all into the monophyletic genus *Asplenium*, big sister to *Hemidictyum* and *Hymenasplenium*. It will be interesting to see how well this phylogeny stands up when the team achieves its next objectives, of increasing the number of species studied to over 350, including distinctive taxa such as the apogamous triploid *A. monanthes*, and reconstructing the family's phytogeographical history.

Next, Fred Rumsey surveyed hybridity in Europe, where there are twice as many inter- and intra-specific hybrid spleenworts (at least 57) as species recognised by *Flora Europaea* (31, split roughly equally between diploid and polyploid). With a wealth of telling photographs, Fred showed that hybridity is more prevalent among polyploids. The diploid *A. hemionitis* for example, and the French endemic *A. jahandiezii*, have no recorded hybrids, while several hybrids are known between the tetraploid subspecies of *A. trichomanes* – the morphology of these nothosubspecies being as intractable as that of the subspecies themselves. Many species have variable genotypes; Turkish plants of *A. septentrionale*, for example, are diploid, while those from western Europe are autotetraploid. The historical confusion between *A. adiantum-nigrum* and *A. cuneifolium* in British collections is due to *A. adiantum-nigrum* itself being a highly variable tetraploid derived on several different occasions from crosses, in both directions, between *A. onopteris* and *A. cuneifolium*. Fred used other British examples, such as *A.* × *clermontae* (*A. ruta-muraria* × *A. trichomanes*), to show that hybridisation rarely occurs when both parents are present in similar abundance, being most likely when one is greatly outnumbered by the other. The apparent paradox is explained by the scarcity, in the latter case, of male gametes of the same species and so the greater chance of fertilisation by a foreign gamete. This situation presupposes that both parents are largely outbreeding species, while the rarity of hybrid formation in apparently favourable circumstances suggests something site-specific about the process. Fred applied these principles to show that *A.* × *jacksonii*, the infertile triploid hybrid between *A. adiantum-nigrum* and *A. scolopendrium*, ought to recur sporadically in the Channel Islands – and lo and behold, this year his wife noticed a "funny-looking fern" on a lane bank in Guernsey. They had refound *A.* × *jacksonii* at only its second world site.

The next two talks summarised years of painstaking research on the biogeography of two familiar and widespread species, *Asplenium ceterach* in Europe and *A. aethiopicum* in Africa. Steve Ansell described research on the European distribution of diploid and tetraploid races of rustyback, a project led by Johannes Vogel to search for glacial refugia in the Mediterranean basin. The cytotypes (also including hexaploids) are morphologically similar but have quite different distributions. Previously, diploids (subsp. *bivalens*) were rarely known and only from Italy and the Balkans but recent fieldwork has detected a much wider distribution across the central and eastern Mediterranean basin and Balkans. However, they are absent north of the line of maximum glaciation, extending through the Alps and central Europe to the Atlantic, where only tetraploids occur. This pattern is explained by alternative breeding systems and associated colonisation mechanisms. Diploid individuals are outbreeding and so diffuse only slowly from their centres of distribution, while tetraploids can reproduce from a single spore via intragametic selfing and are thus capable of long-distance dispersal, so-called 'leading edge colonisation'. Moreover, analyses of chloroplast DNA show that diploids exist in numerous haplotypes, some quite restricted geographically. This diversity, suggestive of radiation from different glacial refugia contrasts with the more mixed population structure found among the widespread tetraploids.

Steve's work is a recent team effort by NHM staff. By contrast, Tony Braithwaite described a lifetime's study of the highly polyploid *A. aethiopicum* begun while a PhD student. Unlike

rustyback this fern is hugely variable, especially in dissection but also in frond size, from a few centimetres to one-and-a-half metres. Again unlike rustyback there are no diploid subspecies, the form with the lowest chromosome number (subsp. *tripinnatum*) being a tetraploid ($n = 72$) of montane forest margins from South Africa to East Africa and Cameroon. The octoploid ($n = 144$) subsp. *aethiopicum* extends to drier areas of Cape Province in South Africa and West Africa; a very small cytogenetically distinct form occurs high on Kilimanjaro. Dodecaploid plants ($n = 216$) reach as far as St Helena and Madeira; hybrids between these geographical races are sterile suggesting they merit their subspecific rank, in contrast to the tetraploid, some of whose morphologically distinct forms cross freely producing fertile hybrids. As well as these sexual cytotypes there are several fertile apomictic forms tolerant of even drier conditions e.g. in Yemen, Saudi Arabia, Canary Islands and the Atlas Mountains. Tony demonstrated with striking photomicrographs how these apomicts produce the unreduced spores necessary for their life cycle by an abnormal (abbreviated) meiosis. He concluded that the dodecaploid and apomictic forms from the Atlantic islands are relict distributions and represent an earlier evolutionary stage than the evolution of these forms in southern Africa. Tony published preliminary results of his research as far back as 1986 (The *Asplenium aethiopicum* complex in South Africa. *Bot. J. Linn. Soc.* 93: 343-378) – his talk at this meeting suggests there is much more to come!

After lunch we visited the herbarium. We marvelled at the extraordinary variability of *A. aethiopicum* and the venation that distinguishes some of its forms (Tony has scoured the world's herbaria to gather the distribution data for his study), while Fred displayed sheets of all ten hybrid spleenworts found in Britain (eight interspecific and two intraspecific). Martin Rickard treated us to examples of hart's-tongue varieties, some from the early 18th century, while bemoaning rules that ban the use of Latin in new cultivar names – compare 'Crispum Faye' with 'Lingua cervina multifida folio' for style and content.

If the morning belonged to molecular taxonomy, gardeners and eco-tourists had their turn in the afternoon. It is difficult in retrospect to imagine how Martin could speak for 30 minutes on one cultivar of one species of fern, but he did and it was fascinating. Surely Martin knows more about *A. scolopendrium* 'Crispum' and its cultivars – 'Fimbriatum', 'Speciosum', 'Kaye's Superb', 'Zeal Dwarf', most of them illustrated with photos from members' gardens – than even Edward Lowe, whose *Our native ferns* enumerates 437 varieties of this species. Horticulturalists in the audience were clearly captivated – am I alone in wondering whether Martin's contribution was slightly hart's-tongue in cheek?

I have never been to Macaronesia (the 'fortunate islands'), whose spleenworts were superbly illustrated by Andrew Leonard in the final talk. Between them, Madeira, the Canaries and the Azores (Andrew did not discuss the Cape Verdes in detail) boast 93 fern species of which 17 are endemic; these 93 include 15 spleenworts. The Macaronesian flora is generally assumed to be a relict Tertiary flora of unglaciated oceanic islands, originally acquired by long-distance dispersal and distinct from the flora of, say, Africa – Tony Braithwaite's views about dodecaploid *A. aethiopicum* are consistent with this – but see Vanderpoorten, Rumsey and Carine (Does Macaronesia exist? Conflicting signals in the bryophyte and pteridophyte floras. *Am. J. Bot.* 64: 625-639, 2007) for a critical analysis of the hypothesis. Be that as it may, Andrew's photos, each localised to an island so that geographical variations could be clearly seen made me determined to repair my grave omission. I have to find *A. azoricum*, distinguish *A. aureum* from *A. lolegnamense* and *A. octoploideum*, and decide for myself whether *A. terorense* (an endemic named after the village of Teror in the Canaries) deserves species status. And I would like to help Andrew relocate the intriguing hybrid, probably *A. onopteris* × *A. ceterach*, which he found and photographed on Tenerife but cannot re-find. But just in case I (and you) don't have time for this, Andrew has kindly put his photographs on the web for all to enjoy – go to www.andrew-leonard.co.uk/Aspleniums%20of%20Macaronesia/page1.html for a visual treat. On that note we ended a stimulating day in the company of our favourite family.

REGIONAL MEETINGS

YORKSHIRE FERN GROUP

Arncliffe, Littondale, north of Skipton, North Yorkshire – 1 March Bruce Brown

It was Ken Trewren who suggested a winter polypody outing to Yew Cogar Scar above Arncliffe in the Yorkshire Dales, little realising quite what was involved in getting there. I had explored the area the previous winter and found these limestone crags and scars alongside Cowside Beck well festooned with polypodies. All three species were recorded along with *Polypodium* × *mantoniae* and *P.* × *font-queri* (the hybrids confirmed by Rob Cooke). Accessing the crag base was, however, difficult because the beck was too wide and deep to wade in winter, and the direct route along the correct side of the beck was barred by a meander biting into the bank making a cliff-face.

On the allotted day six members turned up to face a steep climb out of Arncliffe village on the 'Monks Road' path. At the start (34/931718) we had passed the pub's dry limestone garden with rather stunted specimens of an *Osmunda* and a *Dryopteris dilatata* cultivar, obviously struggling to cope in this (for them) unnatural environment. The climb levelled out at 400 metres altitude. A wet flush still showed some old *Selaginella selaginoides* spikes that I had cairn-marked on a local naturalists' walk the previous autumn.

We then started the steep descent back to Cowside Beck, passing a rare colony of *Dryas octopetala* (mountain avens) on a limestone crag en route. Here was also *Asplenium trichomanes* subsp. *quadrivalens*, *A. ruta-muraria*, *A. viride* and some *Dryopteris filix-mas*. (*Gymnocarpium robertianum* also occurs here but was not seen on our winter visit.) After a bit of slipping and sliding we finally reached the valley bottom and headed upstream alongside the steepening crag face. The heart of the *Polypodium* communities is at the point where a steep gully dissects the rock (34/919707), with large fronds of *P.* × *font-queri* luxuriantly covering the higher ledges. *P. interjectum* and some *P.* × *mantoniae* were recorded lower down the crag face. *P. cambricum* occurred as smaller fronds occupying vertical cracks in the crag on the west edge of the gully. Another 100 metres upstream, where the scar is less craggy, a small valley can be ascended and here we lunched, noting colonies of *P. vulgare* amongst the rocks and tree roots, plus some dead fronds of *Cystopteris fragilis*.

A bit further on and the crag steepens again. Here I had previously noted *P. interjectum*, but there were some higher colonies that we sampled on this visit, which were subsequently confirmed by Ken Trewren and me to be *P.* × *shivasiae*, thus making the full complement of all six *Polypodium* taxa present on Yew Cogar Scar! At the next tributary stream there was more *P. vulgare* and a nice group of *Polystichum aculeatum*. But from here the steep climb back up to the Monks Road could no longer be avoided, in order to make our way back to Arncliffe.

Moonwort Survey, North York Moors – 17 & 31 May Barry Wright

In 2008 the moonwort survey returned to the North York Moors. On 17th May the usual loyal band of surveyors met between Castleton and Hutton-le-Hole at the Lion Inn (44/678996) on a slightly inclement day that necessitated the use of waterproof paper for the recording. As with the 2007 survey the aim was to revisit some of the former strongholds for both moonwort (*Botrychium lunaria*) and adder's tongue fern (*Ophioglossum vulgatum*) along the roadside verges in the North York Moors National Park. In previous years moderate records had been obtained for the sections of road leading north and south from the Lion Inn.

It was perplexing to discover again that many of the former records of moonwort on these sections of road were not evident and that new records from different locations appeared to have arisen. This raised a number of questions: Were we too early? Had the sheep eaten them? or, Are these species just fickle?! The overall number of records in 2008 was disappointingly low for both moonwort and adder's tongue. Also, many of the colonies appeared to have been reduced to single fronds rather than several as in previous years. However, there did not appear to be any noticeable difference in the size of any of the plants recorded in 2008 compared with 2007, implying that we were not too early.

In case the initial survey was too early, I was able to return to resurvey on 31st May and discovered that the records continued to be relatively sparse compared with previous years. This would tend to indicate that it was not a seasonal effect and it is pointing to the possibility that either the emergence of fronds is very variable from year to year or that sheep are selectively grazing off any fronds, leading to sporadic and patchy recording.

In order to attempt to address which factors are affecting the number of records we make, the proposal for 2009 is to undertake more detailed and repeated monitoring on selected sections. The first method will be to walk along the same sections on four separate occasions at weekly intervals 16, 23, 30 May and 06 June. Ideally on some of these occasions the same sections should be walked by different recorders to attempt to determine if individuals have blind spots or do not record specimens in the same positions as other recorders.

The second method will be to identify what has constantly been recorded as a good strong colony of both adder's tongue and moonwort and to install a permanent re-locatable quadrat over the colony in order to count individual fronds at the same weekly intervals. This technique should determine whether any emerging fronds are being taken by sheep and will also provide a dynamic picture of the emergence and distribution of fronds at a localised scale.

The original intention of returning to previous sites was to confirm continued presence at these known locations; what appears to be happening is that previous colonies may not be evident on the return visit rather than being extinct. But we have picked up new locations with the recent surveys. On this basis repeating surveys is likely to lead to an overall net increase in records that can be added to cumulatively rather than taking an absence of recent records as indicating a loss within the community.

Considering that we started surveying the roadside verges for adder's tongue and moonwort in 2001 we seem to be little advanced in our understanding of the dynamics of this species. Perhaps we need to commission a full-blown research project in order to determine the best time to record these species. Any takers?

Attermire/Langcliffe LNR, Settle, North Yorkshire – 7 June — Mike Canaway

The Attermire and Langcliffe Local Nature Reserve was designated as an LNR by the Yorkshire Dales National Park Authority a couple of years ago and although sporadic visits had been made by local botanists, no serious recording had been undertaken. The site was known to contain *Polystichum lonchitis*, *Dryopteris submontana*, *Botrychium lunaria* and *Gymnocarpium robertianum* for example but the extent of the populations was unknown. Also the sheep that had previously grazed the area had been removed and replaced with Highland cattle in 2007, which would hopefully aid the growth of ferns that were previously being eaten off.

Ten members plus four Craven Conservation Group members assembled near Langcliffe and walked through the stunning limestone landscapes up to the reserve. The first target was a limestone pavement in the northern part of the reserve but en route members were captivated by the numbers of *Botrychium lunaria* seen in the grassland, "possibly 1,000" according to Bruce Brown. The limestone pavement itself contained two nicely developed plants of *Polystichum lonchitis* as well as numerous plants of *Cystopteris fragilis*,

Asplenium trichomanes subsp. *quadrivalens*, *A. viride* and lesser amounts of *A. ruta-muraria*, *A. scolopendrium* and *Dryopteris filix-mas*. The remaining part of the northern block of the reserve was mainly of archaeological interest, containing the remains of an ancient settlement and some burial mounds but botanically consisted of species-poor acidic grassland, so the group headed to the southern part, seeing more *Botrychium* growing near *Saxifraga hypnoides* on a grassy mound; *S. granulata* was also seen.

photo: A.J. Evans

Attermire and Langcliffe LNR, North Yorkshire

Frances Haigh, Denise & Roy Copson, Meg Bradsell, Dave Tayler, Chris Evans, Terry Whitaker, Mike Canaway (walk leader), Bruce Brown, Brian Byrne, Jesse Tregale, Paul Ruston, Helen Sergeant

The southern part of the reserve contains a variety of landforms including limestone pavement, cliff and scree, calcareous grassland and more acidic grassland on glacial drift, concluding at its southern tip with a calcareous mire containing *Primula farinosa* and small sedges. Altitude ranges from about 480 metres near the summit with a steep descent down to the mire at 335 metres. Members first explored the limestone pavements in the summit area recording a further 15 *Polystichum lonchitis* plants, more than doubling the number previously seen. One of these was growing with *Dryopteris dilatata*, which was quite unusual. All of the other fern species recorded in the northern limestone pavement were seen again including some *A. viride* with forked fronds. In addition *Athyrium filix-femina*, *Dryopteris borreri*, *Polypodium vulgare* and *Polystichum aculeatum* were seen but the highlight was the discovery of a couple of previously unrecorded plants of *Dryopteris submontana* growing amongst boulders on a steep slope. *Botrychium lunaria* was once again seen in the grassy areas.

After all the excitement we descended to the mire, passing a colony of *Polypodium* × *mantoniae* growing on a cliff, which had been determined by Bruce Brown over the winter. In the mire members were greeted by a display of *Primula farinosa* in flower and found *Selaginella selaginoides* as well as *Equisetum arvense* and *E. palustre*. A lower level path was then taken back to the reserve entrance, passing colonies of *D. submontana* and *Gymnocarpium robertianum* growing in limestone screes near the well known Victoria Cave. In addition the screes contained some of the ferns seen earlier including *A. ruta-muraria*, *A. trichomanes*, *A. viride*, *A. scolopendrium*, *C. fragilis* and *D. filix-mas*. Getting weary of scree-hopping, a contented group walked back through the limestone pastures to our starting point.

Snowdonia, North Wales – 28-29 June

Saturday – Cwm Llefrith & Moel yr Ogof

Alison Evans

We were extremely fortunate to be joined by Dewi Jones, a local botanist who has studied and written about the plants and plant hunters of North Wales and who was able to guide us to fern treasures of the area. We were also delighted to welcome new member Pippa Greenwood. After meeting at Dolbenmaen church (23/507431) we car-shared for the journey along very narrow lanes to Cwrt Isaf farm and parked at 23/539463. The weather was overcast but dry. After a brisk walk up the Cwm Llefrith path, stopping only to admire the view across Cwm Pennant, we found *Dryopteris borreri* growing under the ladder stile. Shortly after this we left the path to the right to see a fine colony of *Asplenium septentrionale*, having noted the following species on our way there: *A. ruta-muraria*, *A. trichomanes*, *Athyrium filix-femina*, *Blechnum spicant*, *Cystopteris fragilis*, *Dryopteris filix-mas*, *Phegopteris connectilis*, *Polypodium vulgare* and *Polystichum aculeatum*. Heading back towards the path we found *Oreopteris limbosperma* growing in the bank of a stream. In a boggy area beyond this we found *Selaginella selaginoides* and two spikes of *Equisetum sylvaticum*, the latter having apparently returned following the reduction of sheep grazing pressure.

photo: A.J. Evans

Yorkshire Group in North Wales

Jesse Tregale, Pippa Greenwood, Charles & Frances Haigh, Chris Evans, Brian Byrne, Dewi Jones, Bruce Brown, Paul Ruston, Mike Canaway

We were now getting up into cloud on the side of Moel yr Ogof, the path turning left from Bwlch Meillionen, and up through a rocky gully. At the top of the grassy slope (23/559475) we found parsley fern, *Cryptogramma crispa*. In a cleft in the rock to the left of the Bwlch we found a good colony of *Hymenophyllum wilsonii*. On the more level ground higher up we found *Huperzia selago*, then *Diphasiastrum alpinum* and *Lycopodium clavatum*. Dewi then took us to see several plants of *Woodsia ilvensis* looking in very good condition, with one possible *Woodsia alpina* but further investigations are necessary. We returned to the shelter of the Bwlch to have lunch, a bit damp in the low cloud, but very happy to have seen so many good ferns. Brian and Jesse reported that they had also seen *Asplenium viride* earlier in the morning.

We headed back downhill, and then Dewi took us up a very steep grassy slope to see *Asplenium* × *alternifolium*, growing on a ledge above our heads on a rock-face that also supported plants of one of the parents, *A. septentrionale*. Mike Wilcox reported finding

A. trichomanes subsp. *trichomanes*, the other parent, earlier in the day, but we did not see any in the immediate vicinity of the hybrid. We were most impressed that Dewi had managed to locate the plant when visibility was down to a few yards!

On the way down, Pippa spotted a newly-emerged frond of *Dryopteris aemula* in the scree (23/558474). Another new species for the day, *Asplenium scolopendrium*, was growing in the walls of a ruined building. Back at the cars there was much to discuss before Dewi left to join his family for his birthday celebrations. We are most grateful to him for taking us to see such good plants.

After tea we continued fern hunting in and around Beddgelert (23/588482), adding *Asplenium ceterach*, *Dryopteris cambrensis* and *D. affinis* subsp. *paleaceolobata*, *Osmunda regalis*, *Polypodium interjectum* and *Pteridium aquilinum* to our list for the day.

photo: A.J. Evans

Brian Byrne, Mike Wilcox & Jesse Tregale looking at *Dryopteris affinis* subsp. *paleaceolobata*

Sunday – Cwm Idwal **Bruce Brown**

The rain started as we gathered together at Ogwen car park (23/649604) so only scant attention was paid to *Dryopteris filix-mas*, *D. affinis*, *D. dilatata*, *Athyrium filix-femina*, *Oreopteris limbosperma*, *Blechnum spicant* and *Asplenium trichomanes* subsp. *quadrivalens* as we plodded up to Llyn Idwal, cagoule hoods pulled well over our heads. The famous slabs with a few climbers braving the cascading waters were passed by as we continued our ascent towards Twll Du or Devil's Kitchen. More interesting ferns began to appear. *Cryptogramma crispa* was everywhere. *Asplenium viride* and *Cystopteris fragilis* peered out from sheltered rock recesses, along with *Phegopteris connectilis*. We were looking out for *Gymnocarpium dryopteris*, not seen the previous day, and had some doubt over some young looking fronds, but no need to worry, there was plenty to be seen higher up. Clubmosses were spotted – *Selaginella selaginoides*, a nice sprawling patch of *Lycopodium clavatum*, then a bit higher lots of *Huperzia selago* and *Diphasiastrum alpinum*.

It was fascinating to explore the nooks and crannies around the huge boulder field (23/640589), full of interesting fern locations and even some shelter for us under the overhangs. Here were luxuriant growths of the above-mentioned, plus *Polypodium vulgare*, *Dryopteris borreri*, *Polystichum aculeatum* and another new one for our weekend, *P. setiferum*. We lunched under an overhang with some wild goats in attendance, and then joyfully watched as blue skies pushed away the rain. Cameras were soon out as we light-heartedly clambered higher exploring up to the vegetated crags at the side of the great cleft of Twll Du. *Hymenophyllum wilsonii* occurred in several places near the waterfall, and then a nice colony of *Dryopteris oreades*, another of our target species, was reached at around 630 metres altitude, at which point we decided to return. Meanwhile Brian Byrne with some other members had taken a lower line below the boulders and also found *D. oreades* plus an *Asplenium trichomanes* which was later discussed with Ken Trewren and all agreed it was a good candidate for subsp. *trichomanes*.

Skirting the north-west shoreline of Llyn Idwal we noted *Equisetum fluviatile* in the shallows and a few plants of *Isoetes lacustris* were found washed up amongst the tide-line debris. This was the first weekend away that I can recall our Group organising and it was very successful and memorable, and we pass on our thanks to Alison and Chris Evans for organising it.

Havern Beck & Sinnington, North York Moors – 12 July — Ken Trewren

The main objective of this outing was to see four different taxa within the *Dryopteris affinis* group, all growing side by side, in order to assist with their identification in future.

Six people met in the car park at the top of Saltergate bank (44/853937), on what was, unusually for BPS outings, a glorious, sunny day. After admiring the view we descended, firstly along the rim of the Hole of Horcum, and then along a footpath to the top of the Havern Beck ravine, stopping on the way to admire the rare forget-me-not *Myosotis brevifolia* growing along a small stream. So far we had seen only the common ferns associated with acidic conditions, including *Pteridium aquilinum*, *Dryopteris dilatata* and *Blechnum spicant*. From the top of the ravine the footpath down was steep and required some care. Although this part of the Moors is within the sandstone belt and is mainly acidic, in this valley a bed of limestone runs through the beds of sandstone, giving a rich and varied flora.

In the valley bottom there were dense stands of *Equisetum palustre* and frequent patches of *E. arvense*. Although there was no footpath, we back-tracked up the valley for about 400 metres towards a fine waterfall, finding on the way a large plant of *Dryopteris* × *complexa* nothosubsp. *complexa* (44/8466 9486). Below the waterfall, beside the stream, was a huge block of tufa, upon which was growing *Asplenium trichomanes* subsp. *quadrivalens*, *A. ruta-muraria* and *Cystopteris fragilis*. Beside the waterfall there were some fine plants of *Cystopteris*, and in the rocks and slopes below we noted *Equisetum telmateia*, *Dryopteris affinis* subsp. *affinis*, *D. borreri*, *D. filix-mas*, *Athyrium filix-femina*, *Oreopteris limbosperma* and more plants of *E. arvense*, *E. palustre* and *Blechnum spicant*. A single small plant of *Polypodium vulgare* was spotted on a boulder in the middle of the stream.

We then scrambled downstream and diagonally up the slope towards the site that was our main objective of the day. In scrubby *Salix* woodland, *D. affinis* subspp. *affinis* and *paleaceolobata*, *D. borreri* and *D. cambrensis* subsp. *cambrensis* were all growing within a few metres of each other. There were also plants of subsp. *paleaceolobata* that lacked the distinctive crimping of the sides of the pinnules, which made them easily confused with Anthony Pigott's morphotype 'convexa'. Although *Equisetum* × *litorale* has also been found here, on this occasion we failed to find it.

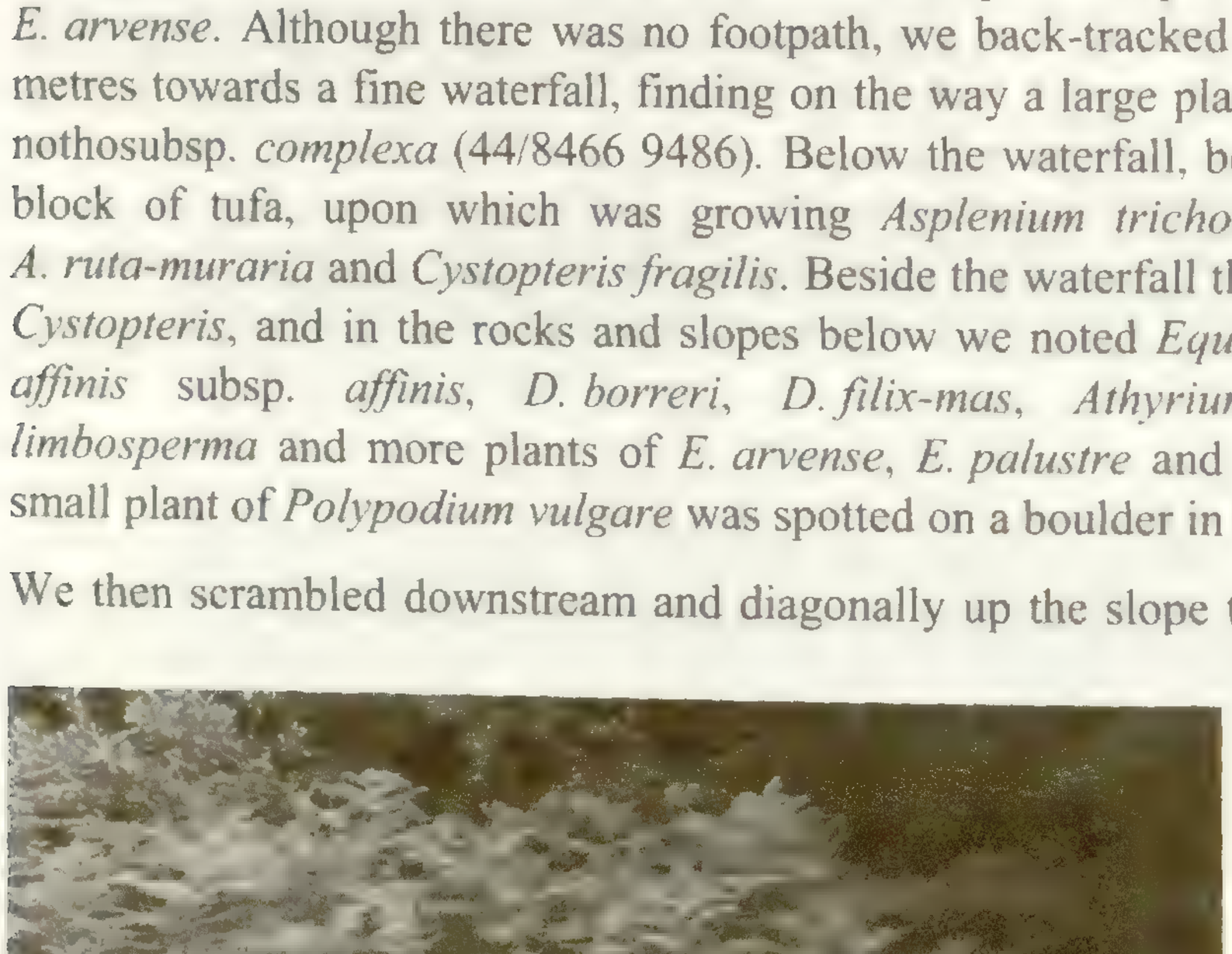


photo K. Trewren

Havern Beck valley, North Yorkshire
Jesse Tregale, Bruce Brown, Brian Byrne, Alison Evans, Mike Wilcox

After lunch we descended to the valley bottom and made a short detour into the bog to see the orchids, which included *Dactylorhiza fuchsii*, *D. maculata*, *D. majalis* subsp. *purpurella* and, most notable of all, the early marsh orchid *D. incarnata*. We also found *Equisetum fluviatile* beside the stream that runs through the bog. From here we made the long ascent back to the car park. Newton Dale itself (of which Havern Beck is a tributary) is of considerable geological interest, being perhaps the best example in Britain of an overflow channel, formed when a lake in the Esk valley to the north overflowed across the Moors into the Vale of Pickering, cutting out a 100-metre deep valley in what is thought to be as short a period as thirty years!

There was a majority vote to visit the site of the recently discovered new *Polypodium* species near the village of Sinnington. En route we stopped by the roadside at Lockton (44/848899) to see some fine plants of *P. interjectum*, *P. vulgare* and the hybrid between them, *P.* × *mantoniae*. Unfortunately, the bank at the site upon which *Asplenium adiantum-nigrum* had previously been seen was found to be completely overgrown with brambles. Since a previous visit to the *Polypodium* site at Sinnington was covered in the 2007 *Bulletin*, the details need not be repeated here, other than to say that additions to the day's tally of species included *Asplenium scolopendrium*, *Polystichum aculeatum*, *P. setiferum* and *P.* × *bicknellii*, bringing the total of fern taxa for the day to 26. It was a very satisfying day that included some rare flowering plants, and the fine weather was an additional bonus.

Chatsworth House Gardens, Derbyshire – 16 August **Paul Ruston**

Six members and three guests met at the car park of Chatsworth House, the ancestral home of the Devonshires, for the Yorkshire group's first visit to Chatsworth's gardens. Before the gardens opened we looked at the north and east-facing sides of the main and outer garden wall, where *Asplenium adiantum-nigrum* and *A. ruta-muraria* were well established.

Prior arrangements had been made with the Head Gardener, Mr Ian Webster, for us to enter an underground access/ventilation shaft, situated where Sir Joseph Paxton's Great Conservatory stood before it was destroyed after the Great War. During a visit to the gardens the previous year I had looked through the metal grille covering the shaft and noticed something green and ferny down in the abyss. Ably assisted by two members of the garden team, Dan Wood and Floss Milner, we descended the ladder provided and were met by the bright green,

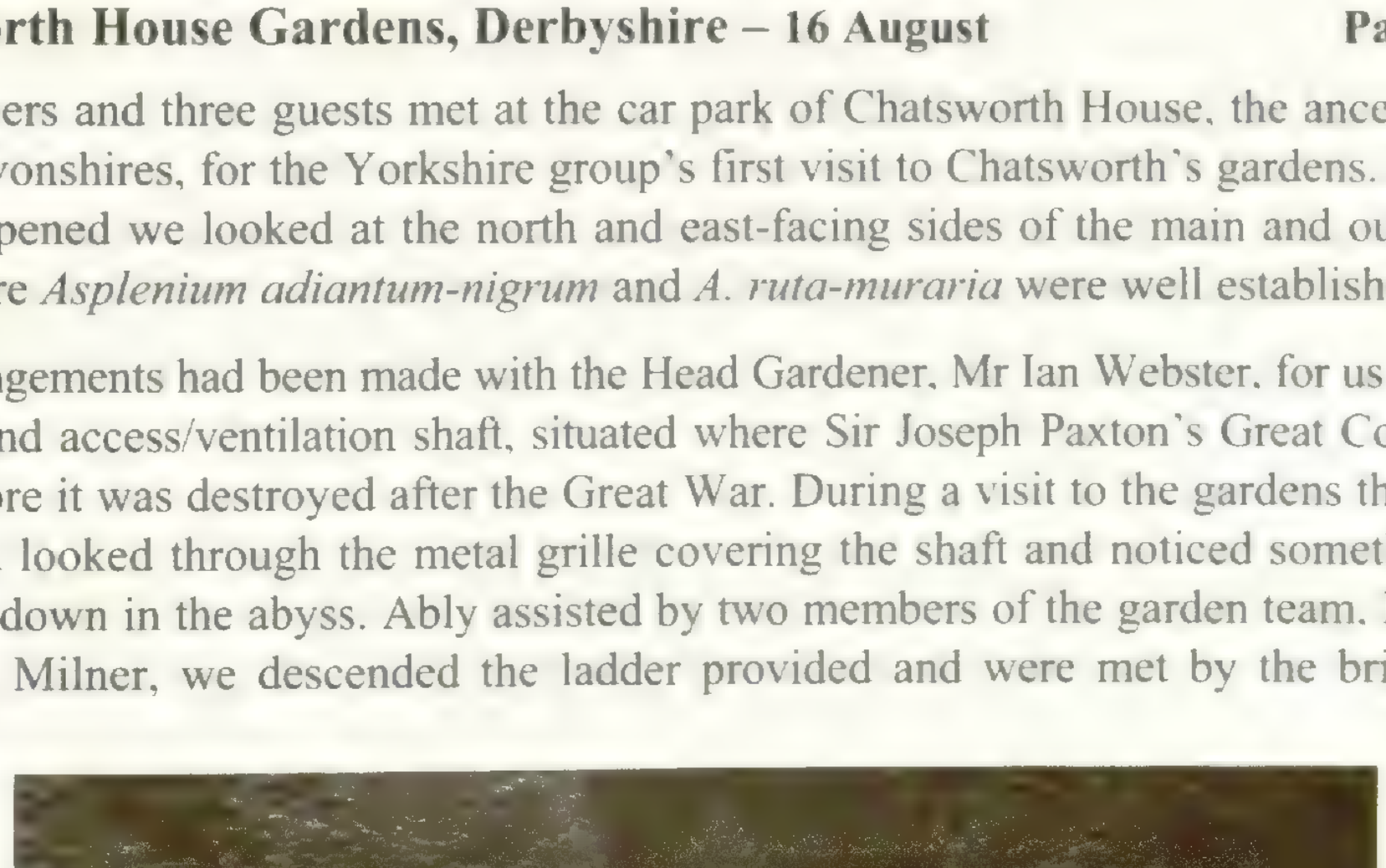


photo: P.I. Ruston

Chatsworth Garden

Phyl Abbott, Floss Milner (*behind*), Brian Byrne, Dan Wood, Bruce Brown, Howard Rockley, Cedric Abbott, Marion Rockley, Eily Ruston, Catherine Trower

arching fronds of *Pteris cretica*, its rhizomes growing in loose material that had built up at the base of the shaft. The walls of the shaft were of crude limestone block construction and appeared eroded or corroded, maybe from the sulphurous fumes coming from the eight coal-fired boilers that powered the heating system of the Great Conservatory. The boilers were housed below the conservatory in a maze of tunnels that connected to the access shaft that we were now in. *P. cretica* 'Mayii' was seen, and variegated *P. niponica* was well established in the rock matrix. There was also *Polystichum aculeatum*, prolific and lush *Cystopteris fragilis* and plentiful *Asplenium scolopendrium*, while *Selaginella kraussiana* filled the spaces between the ferns. We scaled the ladder to enjoy a lengthy discussion, thanked Dan and Floss for their kind assistance and retired to the Great Cascade for lunch.

The Rock Garden was created by Paxton and his team of gardeners during the 1840s. Among towering rocks and boulders and along the sides of a multitude of narrow pathways we saw *Dryopteris dilatata*, *D. filix-mas*, a multi-crowned *D. erythrosora*, *Athyrium filix-femina*, *Polypodium interjectum*, *Polystichum munitum* and some fine *P. setiferum* 'Divisilobum'. Our second visit to the underworld was to the Coal Hole. Prior to the onset of winter, 300 tons of coal used to be deposited in this deep stone-lined bunker and transported along a tunnel to fuel the boilers of the Great Conservatory. On the damp, moss-covered walls we saw *Athyrium filix-femina*, *Cystopteris fragilis* (including a ramose form), *Dryopteris filix-mas*, *Asplenium scolopendrium* and *Selaginella kraussiana*.

A short walk took us to the Grotto Pond where *Osmunda regalis* had established along the banks. The Pinetum gave us our first *Pteridium aquilinum* and some magnificent old trees, many of which were collected and brought back to Chatsworth by Paxton and his patron the 6th Duke during their many travels together throughout the Old and New Worlds. We ended the day by visiting the kitchen gardens – a feast of flowers and unusual lettuce varieties in geometric bedding schemes – where we saw most of the mural ferns previously recorded. On our way back to the car park we passed the Sensory Garden and noticed *Dryopteris wallichiana*, *Polystichum setiferum* and more *Osmunda regalis*. We finished with more to do another day.

Ingleborough area, North Yorkshire – 6 September

Bruce Brown

A putative *Dryopteris expansa* had been found by Matt Stribley on Ingleborough, which is further south in the Pennines than any previous record, so we decided to have a Group meeting to follow this up. One or two recces were made to establish a likely location, which centred on a gritstone boulder-field north-east of Ingleborough summit at 670 metres altitude. Unfortunately on the allotted day the weather was appalling and an ascent of Ingleborough was definitely out of bounds.

I was surprised to find two other members present on arriving at the Old Hill Inn (34/745778). Plan B was to explore the limestone pavement of the Southerscales nature reserve. As we passed through the pastures, driven on by heavy squally showers, some rocky outcrops revealed *Asplenium ruta-muraria*, *A. trichomanes* subsp. *quadrivalens*, *A. scolopendrium*, *A. viride*, *Cystopteris fragilis* and *Dryopteris filix-mas*. Climbing up onto the pavement we straight away found *D. submontana* and *Polystichum aculeatum*, but conditions were very slippery, so we decided to make a beeline to the eastern edge using the wider clints for better foot purchase. Glacial drift has provided some more acidic pockets and we recorded *Dryopteris borreri*, *D. affinis*, *D. dilatata*, *Athyrium filix-femina* and even the odd plant of *Blechnum spicant*. An uncertain *Dryopteris* frond (at 34/743765) was taken for Ken Trewren to confirm later as *D. cambrensis*. We sheltered for lunch in a large shake-hole alongside *Oreopteris limbosperma*. A final slither on the pavement on the way back produced *Gymnocarpium robertianum*.

As it was still early, Mike Canaway showed us Ribblehead Quarry (34 766788), which became a nature reserve after operations ceased in 2000. It was interesting to see the quarry face and rubble below being colonised with vegetation, and ten of the morning's species

were recorded again. Additionally there were some nice wet areas and we could add *Equisetum fluviatile*, *E. arvense*, *E. palustre* and *E.* × *litorale* to our list.

Mike and I returned later to Ingleborough to collect some fronds for Ken Trewren to check. These were displayed at our AGM in October and the results were somewhat curious, with the specimens visually looking like *D. expansa* turning out by spore examination to be *D. dilatata*. But one plant with wholly infertile spores was confirmed to be *D.* × *ambroseae*. Clearly more work needs to be done here!

Hardcastle Crags, nr Hebden Bridge, West Yorkshire – 27 September Brian Byrne

On the last gloriously sunny day of the brief Indian summer, nine of us gathered in the visitor car park (34/988292) of this National Trust property, two kilometres north of Hebden Bridge in the Pennines. This is a woodland site on acidic millstone grit rocks in a steep-sided valley. Our first finds were a surprise, *Cystopteris fragilis* growing alongside *Asplenium trichomanes* subsp. *quadrivalens* on a shallow earth bank under trees, presumably below limestone chippings in the car park. This short bank also held a young *Dryopteris affinis* subsp. *affinis*, *D. filix-mas*, *Asplenium scolopendrium* and *Athyrium filix-femina*. Following the road downhill, *Dryopteris dilatata*, *Blechnum spicant*, *Pteridium aquilinum* and a single plant of *Polystichum setiferum* were found on the roadside bank. Further on a single large frond of *Dryopteris borreri* overhanging the road was all we could see of the plant, and behind the sign at the road junction was a shield-fern that on my recce a week earlier I thought might be *Polystichum* × *bicknellii*. But the group determined it to be *P. aculeatum* in spite of my description of the spores. It was suggested that I collect and examine spores from this plant earlier in the season next year!

At the entrance lodge to Hardcastle crags (34/988291), *Asplenium trichomanes* subsp. *quadrivalens*, *A. ruta-muraria*, *A. scolopendrium*, *Athyrium filix-femina*, *Cystopteris fragilis* and *Polypodium vulgare* were seen and in the garden we admired a large *Osmunda regalis*, which seemed to be regenerating but only within the garden. On the roadside to the river we passed more of these wall ferns, including a substantial colony of *Polypodium vulgare*, before taking the woodland path into the crags on the north bank of the river. A large scaly male-fern was determined as *Dryopteris borreri* morphotype 'robusta'. A little further on *Oreopteris limbosperma* was seen and *D. borreri* morphotype 'insolens' was found. The gametophyte of *Trichomanes speciosum* was found on rocks alongside the footpath, and when exploring off the footpath (34/983291) 'sheets of it' were in close proximity to flowing water! We found *Dryopteris* × *deweveri*, before finding a mixed colony of *D.* × *deweveri* and *D. carthusiana* (34/981290). Finding narrow buckler-fern was particularly pleasing, as it had not been seen for 20 years and was thought to be extinct here!

After lunch we explored the woodland north of the recently renovated Gibson Mill (34/970302). A small colony of *Dryopteris borreri* morphotype 'foliosum' and *Equisetum sylvaticum* were noted. *Polystichum aculeatum* was found again on rocks and the gametophyte of *Trichomanes speciosum* was found on rocks on both sides of the river. On our return via the main estate road, the possible hybrid *Dryopteris* × *critica* turned out to be just an unusual form of *D. borreri* as the spores were later found to be good. A little further on another unusual form with black stipe and rachis densely clad with very dark narrow scales was seen. *Equisetum arvense* was noted at Gibson Mill and the gametophyte of *Trichomanes speciosum* was also found on the rocks outcropping just south-east of the Mill. Back at the car park we observed that with the sole exception of the small *Dryopteris affinis* subsp. *affinis* growing in the car park, the scaly male-ferns in this very extensive woodland were apparently one hundred per cent *D. borreri*.

I would like to thank Ken Trewren for enhancing our pteridological experience on the day and for identifying the scaly male-ferns.

SOUTH-EAST

New Forest, Hampshire – 31 May **Paul Ripley**
(Leader: Andrew Leonard)

Fifteen members and guests met at the first site, Dibden church (41/397086), where *Asplenium ceterach*, rare in the south-east, was happily surviving. We were pleased to welcome Kathryn Hart, who works at RHS Wisley and who was new to our group. Andrew had prepared a whistle-stop tour encompassing most of the New Forest's most interesting ferns and sites. From Dibden the next stop was Beaulieu church (41/389024), where among other wall ferns, the chief interest was *Polypodium cambricum*.

We parked on the roadside crossing Beaulieu Heath (approximately 41/355000) to see several colonies of *Pilularia globulifera*. This occurs in many of the shallow ponds dotted over the New Forest heaths. It was early in the season and the characteristically light green fronds were still uncurling, and no 'pills' were evident. We then parked close to Warbourne Lane (40/337973). Several handsome plants of *Polystichum setiferum* grew in the hedgerows, and of particular note were many fine *Asplenium adiantum-nigrum*. A colony of a very large *Polypodium* was a good candidate for *P.* × *mantoniae*.

photo: R.G. Ackers

Tim Pyner & Roger Golding discuss *Pilularia* in the New Forest

There were no young fronds and most sporangia had dehisced, but a specimen was taken away for confirmation. Pat and Roger made a detour to see *Equisetum* × *litorale*, and other members visited Spinners Nursery, before we lunched at the most congenial Fleur de Lys in Pilley (40/326982).

Parking at Wilverley Enclosure (41/251006), we headed approximately west to see some beautiful stands of *Osmunda regalis*. On the way we noted some fine *Dryopteris* that we thought were unmistakeably *D. cambrensis* but which Roger Golding subsequently identified as *D. affinis* subsp. *paleaceolobata*. This fern had not previously been recorded for the Forest. *D. affinis* subsp. *affinis* also grew here, as well as *D. borreri*, confirmed by Roger from a specimen frond. *D. carthusiana* is quite common in the damper areas of the New Forest, usually more so than *D. dilatata*. We returned by a path somewhat to the north to see a beautiful area of well grown *D. aemula*. Apart from the common *Blechnum spicant*, this area again featured a variety of interesting ferns including *Dryopteris affinis*.

We stopped at the former Holmsley station (41/232006), now a tea-house where the cream teas were, alas, irresistible. Close by grows *Thelypteris palustris*, which most of us visited. Near Warwick Slade (41/270065) we spent some time admiring and photographing *Ophioglossum azoricum*. There was some discussion as to whether a few plants with somewhat larger leaves were *O. vulgatum*.

Our penultimate stop was White Moor (41/278081). A short walk took us to two beautiful and classic sites, the first to an area of very handsome *Oreopteris limbosperma*, looking particularly beautifully lemon-green at this early stage in the season; the second to see a large patch of *Phegopteris connectilis*, similarly impressive. Finally we visited the *Equisetum* × *bowmanii* site near Shave Wood, close by the A337 (41/294121). It was thriving, although slightly damaged by repairs to the road's crash barrier. On an oak tree near Emery Down, and in Shave Wood itself, plants of *Polypodium* were confirmed by Roger as *P. interjectum*.

Our thanks go to Andrew for a thoroughly well planned and informative day, and also to Andrew and others who generously contributed some of their surplus ferns.

Powdermill Wood, Battle, Crowhurst Village Nature Reserve, Crowhurst & John Hicks' garden, Battle, East Sussex – 28 June

Bryan Smith

The ever popular annual joint meeting of the East Anglian and South-East regional groups attracted some 16 members and friends to East Sussex. The weather didn't look promising as we gathered in the car park of Powdermill Wood (51/735147), but the day soon developed into a warm, sunny occasion. Powdermill Wood is ancient woodland within a designated area of a Site of Nature Conservation Interest and is part of the High Weald Area of Outstanding Natural Beauty. The reserve is divided into two sections connected by a track and strip of woodland. Our guide for the day, reserve manager Derek Bates, handed us each a useful guide/map of the reserve and warned us, in view of the closeness to Battle Abbey, to watch out for marauding Norman warriors! We headed to the first section in the west of the reserve, although while we were still outside the reserve we quickly found *Pteridium aquilinum*, *Blechnum spicant*, *Dryopteris dilatata*, *Oreopteris limbosperma* and *Athyrium filix-femina*. Inside the reserve, we added to these *Dryopteris affinis*, *D. carthusiana*, *D. filix-mas*, *D.* × *deweveri* and *D. borreri*. At the second section, to the east of the reserve, we similarly found all of these apart from *Oreopteris*, probably including more *D.* × *deweveri*, but also saw *Asplenium scolopendrium*, *Polystichum setiferum* and *Polypodium vulgare*. In this second area we saw remnants of the waterways that had powered the gunpowder mills from which this area derives its name.

photo: B.D. Smith

Powdermill Wood, Battle, East Sussex

Jack Hubert, Roger Golding, Julian Reed (*back*), Derek Bates, Pat Acock, Leonard Winning, Peter Clare, Gill Clare, Gill Smith, Mark Border, Karen Munyard, Barrie Stevenson, Peter Tindley, Howard Matthews, Tim Pyner, Steve Munyard

A short drive took us to our afternoon site, and after a pleasant lunch we walked up Sandrock Hill Road to Crowhurst Village Nature Reserve (51/763113) through which the former Crowhurst to Sidley railway line used to run. Derek again led us and handed out maps/guides for the reserve. This proved a fascinating site. Leading up to, on and around an old railway bridge we found *Asplenium adiantum-nigrum* (some very lush) and *A. scolopendrium* (including some very fine crested forms). Near the top of the road bridge, a scrabble up the steep bank yielded a couple of very healthy, almost cultivar-like, *Polystichum setiferum* with broad pinnae. Continuing around the path to a small cave entrance, a surprise find up on the sandstone cliff was a single plant of *Osmunda regalis*; who knows how it got there! Further round at the head of a pond, the shady steep-sided slopes provided an excellent habitat for ferns. Apart from large, lush *A. scolopendrium*, we noted some extraordinary *Dryopteris affinis* agg., which were remarkable for their frond length (nearly six feet) as well as trunks that almost appeared tree-fern like. Other ferns specifically recorded were *Pteridium aquilinum*, *Blechnum spicant*, *Dryopteris filix-mas*, more typical *D. affinis* and *D. borreri*, *D. dilatata* and *Athyrium filix-femina.* The walk back down the road to our cars took us past a stand of *Polypodium vulgare* up on a sandstone outcrop.

The final planned part of our day took us to John Hicks' garden in Battle. John had been instrumental in organising our day, but hadn't been able to join us in the field. His garden is a true wildlife haven. It boasts over 400 native and naturalised flowering plants, 46 tree species, numerous recorded birds, butterflies, moths, fungi, reptiles and other animals. Oh yes, there are some ferns as well! The fern list he handed out included nearly 40 species and cultivars. On-going projects included a wall built by John using a traditional ancient lime mortar recipe on which he hopes to grown aspleniums, and development of the fern areas.

Several of the group succumbed to an impromptu offer from Steve and Karen Munyard to visit their home in Hastings for 'tea and cakes'. Inevitably, this led to a guided tour of their garden paradise (full of ferns and exotic plants) – but that's another story.

Finally, it is worth noting that during our joint meeting last year we visited Gerry and June Downey's wonderful garden. What a loss Gerry's untimely death has been. It seemed fitting that at our get-together this year, several of Gerry's ferns passed on by June found new homes amongst our members.

Pippingford Park & Forest Row, Ashdown Forest, West Sussex – 6 September

Pat Acock

We visited Major Alan Morris' estate at Pippingford at his invitation to look at the ferns (51/447309). Alan knew that ferns were a dominant part of the landscape and for many years had been aware of the presence of a rarity in the south-east, *Osmunda regalis*. Our group were interested in some boggy areas on the northern side of a string of man-made lakes with weirs. Small rivulets entering the lakes at regular intervals had cut steep gullies into the sandstone. Many of these acidic gullies were full of ferns, as were the banks of the lakes – *Pteridium aquilinum*, *Dryopteris filix-mas*, *D. carthusiana*, *D. dilatata*, *D. borreri*, *Blechnum spicant*, *Athyrium filix-femina* and *Oreopteris limbosperma*. We searched hopefully for *Dryopteris aemula* in the gullies but to no avail. Above the most easterly lake was a pond and on the banks were three handsome plants of *Osmunda regalis*, one of which must have been of some considerable age. As we were leaving, Paul Ripley managed to find a fine plant of *Dryopteris affinis*.

We drove a short distance to a vantage place overlooking Ashdown Forest for lunch. The slight drizzle did not deter the 16 of us having our lunch in the open air. Nick Hards, who had proposed the meeting, led a renegade bunch into a bog to look for *Thelypteris palustris*, but without success.

On schedule we moved on to park at Nick's sister Julie's house. From here, spotting on our way a house with a fine collection of hardy ferns, we walked to a very wet wooded part of Broadstone Warren (51/432333). Attempting to reach some distant large verdant *Dryopteris*

dilatata, Julian Reed took a small step onto a bog and sank to his thigh. No-one else decided to look for hybrids... We saw again all the ferns of the morning on the similar substrate but were fortunate to come across *D. affinis* subsp. *paleaceolobata*.

Returning to Julie's house the party then moved on to the disused railway line at Forest Row to add three lime-lovers on the line environs, namely, *P. setiferum*, *A. ruta-muraria* and *A. scolopendrium*, as well as *Equisetum arvense*. Julie and her husband Andrew provided a well received tea on our return. Thanks go to them both for hosting us and to Paul Ripley for all the planning.

Field & Indoor Meeting, Appledore, Kent – 25 October

Andrew Leonard

It was one of those beautiful cold sunny autumn days as I drove through the Sussex countryside towards Appledore railway station to meet up with 17 other members of the South-East chapter for our last meeting of the year.

Our first site was almost unbelievable – an unprepossessing bridge near Brenzett (61/008271). Here, on the south side of Summerhouse Bridge, were several plants of *Asplenium septentrionale*: small, somewhat brown but surviving. The next nearest UK colonies are 200 miles away in Cornwall and Wales. This plant obviously has not read the notes in the *New Atlas of Ferns of Britain and Ireland* (page 10), growing as it does in the mortar of the bridge walls.

photo: A. Basil

Site of *Asplenium septentrionale*, Kent

Jennifer Ide, Steve Munyard, Karen Munyard (*back*), Tim Pyner (*in front*), Mark Border, Trevor Lording, Pat Acock, Peter Clare (*back*), Jo Basil, Leonard Winning, Howard Matthews (*in front*), Paul Ripley, Kathryn Hart, Gill Clare, Roger Golding

Our next site was down a sunken lane near Kenardington Church (51.973322). Here, amongst other ferns, could be found many large plants of *Polystichum setiferum*. We then moved to our last site of the morning, Park Wood, Appledore (51.955316). There were many large *Dryopteris carthusiana* and some *D. dilatata*. Despite some diligent searching, we could not find any hybrids. We also saw *D. affinis* and *D. borreri* that were mercifully behaving true to type. There was an unusual general consensus as to their species.

We repaired to Paul Ripley's house, where his partner Lindsey had prepared an excellent cooked meal for all of us. We then settled down to a series of illustrated talks, kicked off by an account of the recent fern holiday to the island of Réunion by Paul Ripley. Then Howard Matthews entertained us with a very full account of his whole year's ferning before Jennifer Ide told us about decorative Mauchline ware techniques using fern fronds. Patrick Acock finished the first half with an account of the visit to Madeira. After cream tea and birthday cake, the talks continued with Steve Munyard's brief account of Canadian ferns, and the evening concluded with an impressive and very professional talk on the year's ferning by Roger Golding.

EAST ANGLIA

Indoor Meeting, Little Thurlow, Suffolk – 9 February

Tim Pyner

Eleven members met for our winter meeting at the regular venue in Little Thurlow. There were two presentations. Gerry Downey gave a fascinating talk on his recent travels in Taiwan and the ferns he encountered along the way. Taiwan seems to be a fern paradise with many potentially hardy species. Tim Pyner then gave a talk on Caribbean ferns that he had found on recent trips to Grenada and Tobago. The volcanic islands of the Caribbean have a very rich fern flora at higher altitudes and these two islands are no exception. Despite only brief visits to the rainforest a large variety of ferns was seen and many photos taken. The Grenada rainforest had been destroyed by a recent hurricane but was regenerating quickly. Ferns were in the vanguard of the recovery and although no mature tree ferns were seen, sporelings and young plants of *Cyathea* and *Cnemidaria* were abundant and dominant in places.

An excellent buffet was provided and we would like to give our thanks to Mary Hilton for her wonderful hospitality.

Blakes Wood, Little Baddow, & Glen Chantry Nursery, Wickham Bishops, Essex – 24 May

Barrie Stevenson

A warm, sunny day greeted the twelve members of both East Anglian and South-East Groups who met at Glen Chantry (52/832132) in order to car-share before travelling to Blakes Wood (52/773066), a National Trust Reserve. Typically of the area of Danbury Ridge, the conditions are acid, the topsoil overlaying gravel. The area of woodland we visited appeared neglected, however, other parts of the wood are managed by the traditional 'coppice with standards' regime. We noticed old stools of previously coppiced hazel totally overgrown, and stands of trees lying in parallel formation exactly where they had fallen, presumably at the time of the 1987 gale. Some sweet chestnuts have survived from this indignity and though only small areas of the root-plates are in contact with the soil, have produced new growth of mini-trees vertically along ancient horizontal trunks.

photo: B.D. Smith

Blakes Wood, Essex

Back: Tim Pyner, Peter Tindley, Barrie Stevenson, Roger Golding, Jennifer Ide, Pat Acock, Neil Dickinson, Jack Hubert, Steve Munyard
Front: Bryan & Gill Smith, Karen Munyard

The fern count was good for this area and we found *Pteridium aquilinum*, *Dryopteris filix-mas*, *D. dilatata*, usually in areas of damp, rotting wood, *D. carthusiana* showing pale scales, *Athyrium filix-femina*, some clumps with red stipes, and splendid examples of *Dryopteris affinis* agg., some of which exhibited fronds exceeding four feet in length. Some

nice examples of *Polystichum setiferum* were noted along a boggy stream but we were unable to find any of the *P. aculeatum* that is mentioned on the notice-board at the reserve entrance.

We next drove to a pathway beside a field that ultimately led to a disused church (52/825113). We stopped on a bridge crossing a dismantled railway to admire a superb colony of *Asplenium ceterach*, a rarity indeed in Essex, there being only two other sites currently known in the whole county. Here they grew on the south-facing wall of the bridge, thriving on the lime mortar between the bricks. We counted a total of over thirty plants. On the other side of the wall, enjoying much shadier conditions, were several *A. scolopendrium*.

We returned to Glen Chantry and after a picnic lunch visited the well established garden and nursery. The garden is superbly maintained and the vast alpine bed, south-facing and totally exposed, is a fine set-piece. It was interesting to find both *Blechnum spicant* and *Adiantum aleuticum* thriving in such harsh conditions, their roots planted in the shade of rocks. Damp areas beside a stream had been colonised by *Matteuccia struthiopteris* and in shady areas could be found well grown cultivars such as *Polystichum setiferum* 'Plumosum Bevis' and *Athyrium filix-femina* 'Victoriae', the latter with red stipes.

The nursery stock is mostly of herbaceous plants, mature examples of which are grown in the garden. Several members failed to resist temptation and left clutching their purchases as souvenirs of a splendid day, which was ably led by Tim Pyner.

Bonny Wood, Barking Tye, & Kersey's Farm, Mendlesham, Suffolk – 26 July

Howard Matthews

The sun blazed out of a cloudless blue sky over the nine members who met at Barking Tye village hall, from where we walked for about half a mile to our site for the morning, Bonny Wood (62/073518). Its recorded history stretching back for seven hundred and fifty years, this SSSI was purchased by Suffolk Wildlife Trust in 1987.

We found a moderate range of common woodland fern species, not in any great quantity (with the exception of *Pteridium aquilinum*) and most were on the small side. This was probably due to the continual management of the wood by coppicing, which left very few long-term undisturbed spots where ferns could become established, and also much of the wood lay on badly drained soil. *Dryopteris filix-mas* grew in the shade along the less disturbed borders of the broad paths, while under the tree canopy were scattered plants of the same, plus *D. dilatata*, *D. carthusiana* and *D. borreri*. *Athyrium filix-femina* was found in a damp area at the side of a path. A solitary fern growing on a stump by a path was intermediate in characters between *D. carthusiana* and *D. dilatata*, for it had erect narrow fronds with long stipes, but its scales were dark. A lengthy debate concluded that it was a possible hybrid, and possible it had to remain, for the plant had already shed its spores, so there could be no microscopic examination of them later.

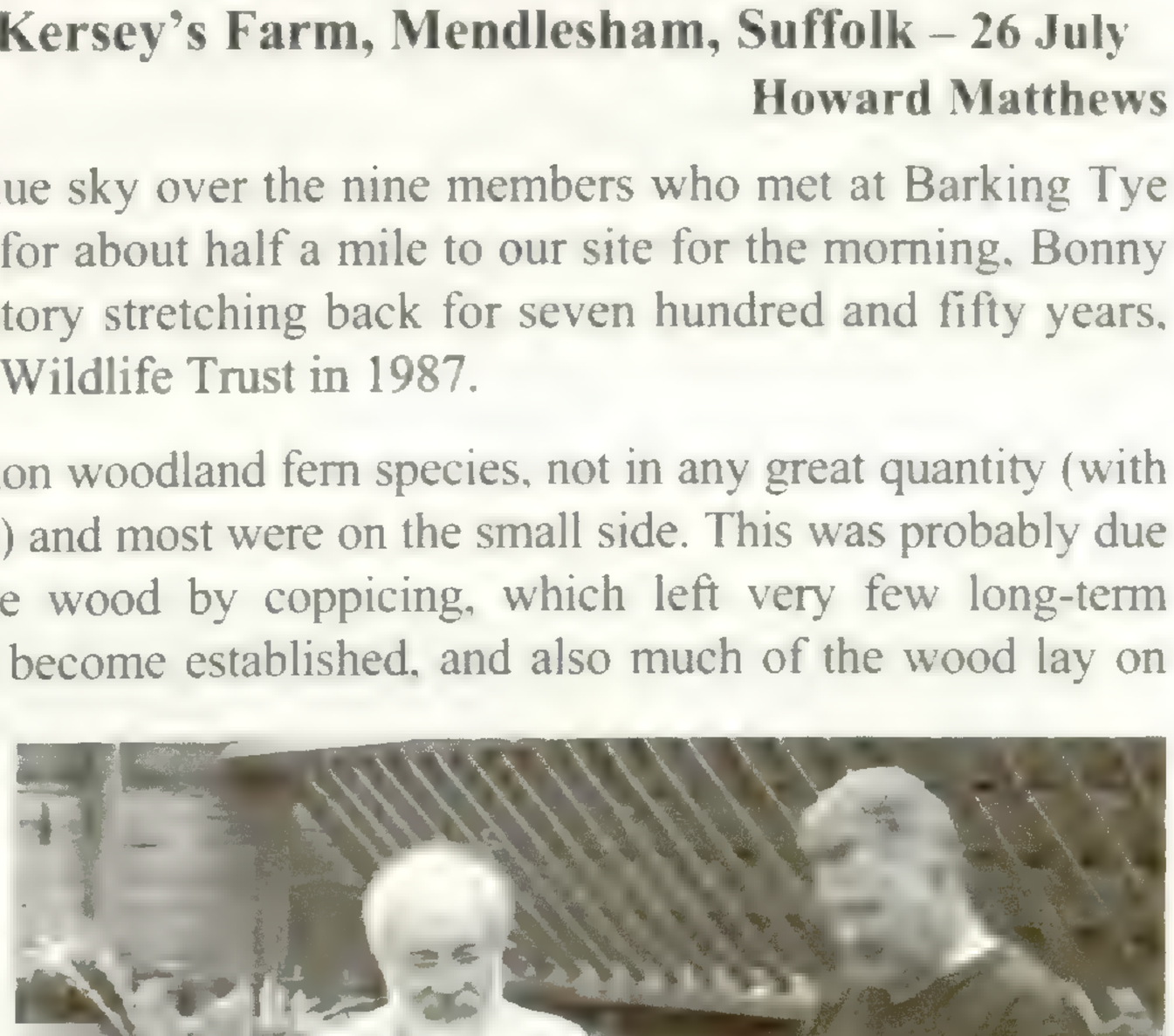


photo: H.W. Matthews

Kersey's Farm, Mendlesham, Suffolk

Anthony Pigott and Tim Pyner discuss tender *Equisetum*

Returning to our cars, we drove northwards to the village of Mendlesham, where we regrouped at a public house before continuing to the home of Anthony and Margo Pigott at Kersey's Farm. Here we browsed amongst Anthony's large collection of *Dryopteris* and *Equisetum*, trying to discern the subtle differences between similar ones, and we mingled with around seventeen members of the local NCCPG group who were arriving to hear Martin Rickard give a presentation about ferns. Martin's talk aimed to show how different ferns are and what species there are. In addition to detailing the species that can be grown in East Anglia, he made interesting digressions into the diverse subjects of stumperies, Coalbrookdale benches, fossil horsetails, exotic ferns and tree ferns, all of which he illustrated with slides.

Refreshments were available following the talk, after which there was just time for another look around the garden before we made our ways home. Our thanks go to Martin for giving his time to entertain those present and to Anthony and Margo for hosting the event.

Bovingdon, Hertfordshire & Ley Hill, Buckinghamshire – 9 August Tim Pyner

Seven members met our leader for the day, Howard Matthews, at the Little Hay Golf Complex, Bovingdon. We also had the pleasure of being accompanied by two local members of the Herts. & Middlesex Wildlife Trust, Gerald Salisbury and Jill Saunders, who were able to give some insights into the places we visited. The day started dry but before long the forecast rain started to fall. It turned out to be one of the wettest days the East Anglia Group had encountered for many years.

Our first foray was a short walk to Gorsefield Wood (52/031048). Here we saw several large *Dryopteris affinis* that were not quite typical. As usual some time and discussion ensued before we finally came to agreement. These were accompanied by plentiful *Athyrium filix-femina*, *D. filix-mas*, *D. dilatata* and *Pteridium aquilinum*.

We then took a short trip in our cars to visit Bury Wood, Boxmoor (52/042050). Here *Dryopteris filix-mas*, *D. dilatata* and bracken were frequent. *D. affinis* and *D. borreri* were both scattered through the wood, the latter on occasion as the morphotypes 'foliosum' and 'insolens'. *Polystichum setiferum* occurred occasionally and Howard pointed out

photo: R. Golding

Epiphytic *Dryopteris dilatata* at Ley Hill, Bucks

Tina Matthews, Steve Munyard, Tim Pyner, Gerald Salisbury,
Howard Matthews, Barrie Stevenson, Karen Munyard

a single plant of *P. aculeatum* that had appeared recently. The only other ferns noticed were scattered individuals of *Athyrium filix-femina* and *Dryopteris carthusiana.*

We then moved on to Ley Hill where lunch was taken. We ventured out into the rain to visit a nearby green lane where several splendid *Polystichum aculeatum* grew on the lane bank (42/994026). Green Lane forms the boundary between Herts and Bucks and the ferns only occur on the Buckinghamshire side. On the way back to the cars we managed to find a large fern that Roger Golding had spotted in a tree as he drove to the site. As expected it was *Dryopteris dilatata* albeit very healthy and vigorous.

We finished the day by visiting a small nursery that sold a range of common and less common ferns and also had a small tea-room that was most welcome. We would like to thank Howard for organising a most interesting day away from our usual core area.

Autumn Indoor Meeting, Oulton Broad, Suffolk – 11 October — Tim Pyner

Ten members gathered in Oulton Broad at a new venue for our regular autumn meeting. Gill and Bryan Smith had offered to accommodate the meeting and good weather allowed us to spend some time in their garden. The garden had developed well since I last visited and the fern areas have increased substantially. The variety of ferns has also expanded and there was plenty to keep us interested.

Members were able to present a selection of photos of their travels and BPS meetings from the past year. These were full of interest with a wide range of ferns and BPS members being shown, the latter often in interesting poses or settings. As usual the afternoon was completed with an excellent selection of food kindly provided by members and superbly presented by Gill. Members also kindly donated many plants that were used in the plant sale.

NORTH-WEST

Edinburgh – Royal Botanic Garden & Arthur's Seat – 21 June — Peter Campion

(*Participants*: Sally Beamish with two colleagues - Ruth Charles & Maureen Fleming, Bruce Brown, Peter & Sarah Campion, Anne & Barry Colville, Alison & Chris Evans, Alec & Linda Greening, Robert & Sue Sykes.)

What better than a trip to Royal Botanic Garden Edinburgh with Mary Gibby and Heather McHaffie as guides and the bonus of the Arthur's Seat rarity, *Asplenium* × *murbeckii*. For those who have not visited the RBGE the writer can only urge that a visit is made and for those who have, the writer's enthusiasm will come as no surprise. So the description will be brief and names of ferns will be few as otherwise pages would be filled!

photo: P.J. Campion

North-West Group at RBGE

Mary Gibby, Linda Greening, Heather McHaffie, Robert & Sue Sykes, Ruth Charles, Sally Beamish, Maureen Fleming, Alec Greening

We gathered at about midday inside the entrance of the Palm House, the tallest in Britain and built in 1858, just by two *Cyathea medullaris* in large pots, their large black stipes polished like ebony from all the passing hands feeling them. Mary and Heather took us through several tropical glasshouses, in one of which were large specimens of *Marattia fraxinea*, which summoned up visions of dinosaurs, through to the fern house. Here we enjoyed a stunning array of Equisetaceae, Lycopodiaceae, Selaginellaceae, hepaticae and of course ferns, forming a mass of shades of green, with black and bronze here and there.

The party paid homage to the memorial to Linnaeus in the paved garden outside the glasshouses before consuming our packed lunches. We enjoyed a privileged glimpse of the shade tunnel behind the public scenes, with many covetable ferns growing well, and (too briefly) the fern houses packed with tender ferns and an astounding row of magnificent *Blechnum cycadifolium*.

After lunch our day turned into a field trip to the SSSI, Arthur's Seat. Considering the huge number of people who use the area for recreation it is amazing how 'wild' it feels. We were given a conducted tour of the *Asplenium* taxa, the rare hybrid *A.* × *murbeckii* and nearby its parents *A. septentrionale* and *A. ruta-muraria*. *A. adiantum-nigrum* and *A. trichomanes* were seen growing nearby as well, quite a feast. We then walked down to Hunter's Bog, the site of a former glacial lake, where we were able to view large numbers of *Ophioglossum vulgatum* – small but good to photograph especially as the ground was dry for once.

Some of us went and had tea and cake and then went our separate ways before the rains fell. Thanks to President Robert Sykes and to Mary and Heather for a first class day.

Newlands Valley, Keswick, Cumbria – 2 August **Roy & Denise Copson**

Our day began at Little Town (35/231194), south-west of Keswick, with threatening clouds overhead. We proceeded in a southerly direction along a valley bottom track towards the head of the Newlands Valley. The slopes beneath Eel Crags and Red Crag were our main focus as this area has a rich pteridophyte flora. An early observation to whet our curiosity was a lady fern *Athyrium filix-femina* by Scope Beck whose rachis had ruby colouration, a visually enriching addition to an already beautiful fern. Beyond Low Snab Farm we explored a disused mine working (35/229184) and were rewarded when Mike Hayward found green spleenwort *Asplenium viride* occupying transverse fractures in a small rock-face. This was the only record for this taxon for the day. A little further on by the side of the track was a large rock some nine metres high by thirteen metres round (35/228171). Here Harvey Shepherd drew our attention to black spleenwort *A. adiantum-nigrum* occupying small fractures in the much pitted surface of the rock-face. Moving on, we left this distinctive landmark and the shadowy silhouette of Castle Nook Crags behind us and began to climb gradually to our prime location. Almost immediately we were in a flushed habitat and soon separated lesser clubmoss *Selaginella selaginoides* from the mosses and grasses. In the dryer rocky grassland there were other clubmosses, namely fir clubmoss *Huperzia selago*, stag's horn clubmoss *Lycopodium clavatum* and alpine clubmoss *Diphasiastrum alpinum*.

Sheltered in the recesses between rocks were two typical woodland ferns oak fern *Gymnocarpium dryopteris* and beech fern *Phegopteris connectilis*, seemingly at home in an otherwise open landscape. In due course we located scaly male fern *Dryopteris affinis* subsp. *affinis*, broad buckler fern *D. dilatata* and mountain male fern *D. oreades* (35/229164) identified by Bruce Brown, all co-habiting in boulder-scree. As a coda, parsley fern *Cryptogramma crispa* was a common and conspicuous component of the pteridophyte flora on the Fell. The remaining taxa seen elsewhere in the valley were male fern *Dryopteris filix-mas*, scaly male fern *D. borreri*, lemon-scented fern *Oreopteris limbosperma*, hard fern *Blechnum spicant*, common polypody *Polypodium vulgare*, maidenhair spleenwort *Asplenium trichomanes* subsp. *quadrivalens* and bracken *Pteridium aquilinum*.

With regret we departed this natural Eden to make our way to nearby Grange village where fellow BPS members Nan and Sam Hicks generously gave us tea and a guided tour of their garden, home to a fascinating collection of ferns. Thank you Nan and Sam for your hospitality. Thank you also to those who shared the botanising with us despite the poor weather forecast on a day when the sun did eventually shine.

Sizergh Castle & Lancaster Canal, Stainton, Cumbria – 31 August Peter Campion

This garden visit and field trip saw us breaking with recent tradition by having a meeting on a Sunday! We had hoped for a private tour of Sizergh gardens on a Saturday when they are shut but it was not to be. The secretary apologises to those who came on the Saturday or missed seeing us in the car park. It does emphasise the importance of notifying the leader or the secretary that you are intending to come.

It was interesting to see the *Dryopteris* collection and the osmundas. We looked at the specimens growing in borders and at the stock growing under netting for transplanting with great interest. A little muttering went on. "Well that is wrongly labelled" and "that certainly is not a blankety-blank", "This is the original *Victoriae* and I asked them to give it special care, and look at it!" The extensive gardens at Sizergh belong to the National Trust and John Hawley, the Head Gardener, is under huge pressure to maintain and develop them and deliver a wide ranging programme of events with minimal staff. He is not a fern man but he is learning fast, and give or take the odd label, his ferns are looking superb. The old *Osmunda gracilis* (or is it *O. regalis* var. *spectabilis*?) is huge and beautiful, and there is a very fine crisp form of *O. regalis* 'Undulatifolia'.

In the afternoon Frances Haigh took us to the Lancaster Canal at nearby Stainton (34/521855). The short walk along this early coal canal enabled us to see the elegant early engineering of the canal bridges and water management features, still working well after so many years. As promised we were shown *Polystichum setiferum* and *P. aculeatum* growing side by side (but no hybrid) and large quantities of the water fern *Azolla filiculoides* curiously not killed by the frosts, perhaps due to the mild winters and the sheltered place. A fine crop of *Equisetum fluviatile* was verified by our experts too. Thank you Frances for another well researched field trip.

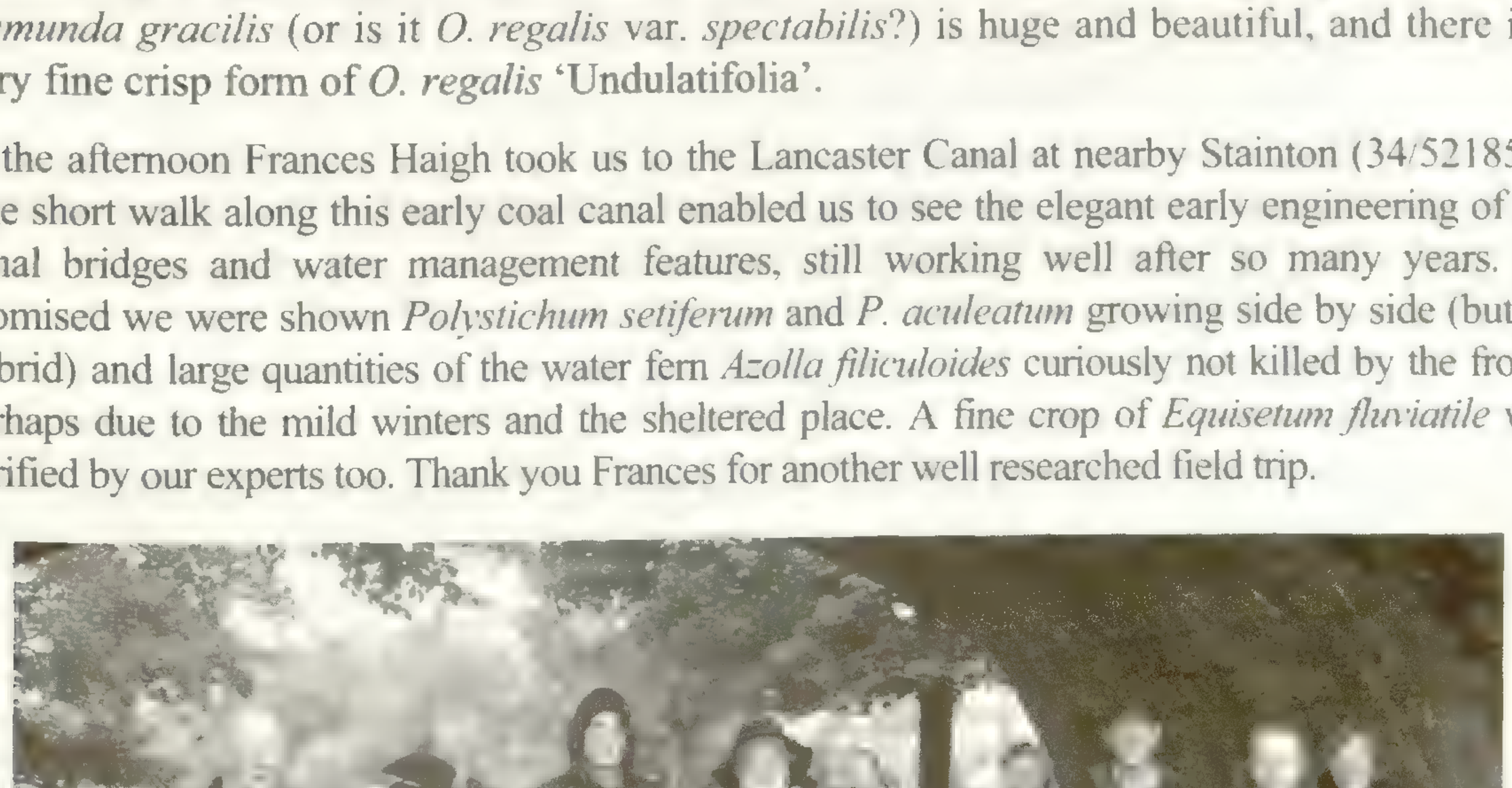


photo P J Campion

Stainton Crossing Bridge, Cumbria

Robert Crawford, Melville Thomson, Michael Hayward, Roy Copson, Robert Sykes, Frances Haigh, Denise Copson, Anne Haskins, Bruce Brown, Mike Canaway, Alison Evans

Whitbarrow, South Cumbria – 13 September

Bruce Brown

Robert Sykes showed us a list from a 1980 BPS meeting accompanied by Jimmy Dyce and Martin Rickard when 26 species were found on Whitbarrow, south-west of Kendal. We were not able to quite match that number but over 20 species were found. *Polypodium cambricum* was also spotted on a roadside wall in the little hamlet of The Howe, but this could be considered off-limits for the day's total.

Alec Greening and Robert had researched the area well, as 14 of us set off from the small parking area (34/454884), twisting along from path to path and diverting onto areas of limestone pavement. Typical calcicoles present were *Cystopteris fragilis*, *Asplenium trichomanes* subsp. *quadrivalens*, *A. scolopendrium*, *A. ruta-muraria*, *A. ceterach*, *Polypodium interjectum*, *Polystichum aculeatum*, *Gymnocarpium robertianum* and *Dryopteris submontana*. As we got a little higher, richer woodland soils produced *Pteridium aquilinum*, *Dryopteris filix-mas*, *D. borreri* and one nice clump of *D. carthusiana*. There was also *Polypodium vulgare*, and then along an uphill section of track *Athyrium filix-femina*, *Phegopteris connectilis*, *Oreopteris limbosperma*, *Dryopteris dilatata*, *D. affinis* and even *Blechnum spicant* occurred.

We finally struck open country (34/443875) and walked southwards along the wall-side exploring limestone outcrops along the way and finding *Asplenium viride*. We lunched near a small pool with *Equisetum fluviatile*. It was on the last pull up to the summit cairn that one small plant of *Asplenium adiantum-nigrum* was discovered, hiding in shattered pavement (34/442870) and possibly a new record for that area. Heading north, now in much brighter weather with improving views, we hunted out more calcicoles before descending eastwards back into woodland at 34/446884 and eventually to our start point. Known sites for *Botrychium lunaria* and *Ophioglossum vulgatum* were checked en route but nothing was to be seen in September. Incidentally our missing ferns from the 1980 list were *Dryopteris expansa*, *D. oreades*, *D.* × *complexa* and *Polystichum setiferum*.

15th Annual General Meeting, Holehird, South Cumbria – 4 October

Peter Campion

Sadly the weather was windy and very wet, breaking a tradition of fine weather over the years for this meeting. A few brave members took advantage of the gaps in the programme to don wellingtons and enjoy the gardens; however, most of us preferred the hospitality of the Members' Room. After the welcoming coffee provided by Frances Haigh and her assistants we had a helpful presentation from Ken Trewren on 'Identifying some taxa within the *Dryopteris affinis* complex'. A very clear description of the main taxa to be found in and near Cumbria was spelled out for us. The specimens on the table were there for us to examine and identify the distinguishing features. Ken's excellent CD of all these details was available and we all went away with the sentiment – rather like the writer's school reports – must try harder next season! Alison Evans expressed our appreciation in a vote of thanks for Ken's time and efforts.

After lunch we did our business and both Secretary and Treasurer were reappointed for a further year. The secretary was very encouraged with the suggestions for next year's programme and volunteers to lead them. The competitions went well this year with a good selection of ferns and some lovely photographs. The prize for the best indoor fern went to Melville Thomson and to Robert Sykes for his outdoor fern. Linda Greening won the best photograph prize and probably would have won second and third prizes if we had offered them. Thank you Ken Trewren for judging the ferns and Michael Hayward for judging the photographs.

Michael Hayward gave us an illustrated talk on 'Exotic Ferns: ferning in the sub-tropics', experiences of trips to Trinidad, Singapore, Hong Kong, La Réunion and Costa Rica. We certainly gained an insight into how Michael has gained such a broad knowledge of so many exotic ferns and a respect for his ability to grow so many from spores brought back from his trips.

Our grateful thanks to the speakers and to those who provided refreshments; altogether a good day.

BOTANICAL CORNWALL GROUP

Matt Stribley

This year we set a couple of 'ferny' meetings in the Botanical Cornwall Group (BCG) programme, while the emphasis of the main meeting programme was placed on recording the flora, mainly in under-recorded one-kilometre-square units.

Cremyll & Mount Edgcumbe, East Cornwall – 14 October 2007

The leader, Ian Bennallick, was joined by only one person to spend the day recording at the easternmost part of Cornwall, Cremyll and Mount Edgcumbe Country Park, just across the River Tamar from Plymouth. However, well over 250 flowering plant and fern species were recorded for the tetrad including some good ferns. This is the bit of Cornwall that has small outcrops of Devonian limestone (limestone is of very rare occurrence in Cornwall) so we expected a base-rich flora. We saw good patches of *Polypodium cambricum* on walls at Cremyll (20/455535), last recorded here in 1960. Walking along the paths around the low, mostly wooded, rocky coast skirting Mount Edgcumbe Park, we added *Asplenium marinum* (last recorded here in 1900!) In Pigshill Wood (20/455522) we investigated an unconfirmed recent record of *Polystichum aculeatum* (also recorded in this area in 1930). Unfortunately, the area of woodland that it was reported from had been clear-felled, but many ferns including *Dryopteris affinis*, *D. dilatata*, *Polystichum setiferum* and one plant of *Dryopteris* × *complexa* were luxuriant. On the side of a track nearby we found *D. aemula*, which appeared to be new to tetrad SX45.

Sennen Cove to Land's End, Cornwall – 29 December 2007

This was the first time we had held a meeting over the Christmas period but it proved enjoyable and we hope to arrange a similar event in 2008. The purpose of the meeting was to look for *Ophioglossum lusitanicum* while working off the Christmas pudding! *O. lusitanicum* was first found on the Isles of Scilly in 1950 but there was an earlier record (1840) from the Land's End area. This Cornish record was rejected by Davey in *The Flora of Cornwall* (1909) but L.J. Margetts and R.W. David in *A Review of the Cornish Flora 1980* considered that it may have been correct and suggested that the plant should be searched for. So following their instruction we duly went in search of the plant.

We met at Sennen Cove (10/351263) on a very windy but sunny day, and followed the cliff path towards Land's End, searching in patches of shorter vegetation without success. Our most notable find was a patch of *Trifolium occidentale* (western clover), which was a new record for the site. While enjoying a cup of coffee in the café at Land's End we speculated about the types of habitat in which we have seen *O. lusitanicum* and concluded that Land's End wasn't typical. One area that may be worth a search is the dune area behind Sennen Cove. It was an enjoyable meeting and we remain hopeful that one day the elusive *O. lusitanicum* may be found in the area.

Pendeen Watch, north of St Just, Cornwall – 23 July

A group of eight of us met with the intention of exploring and recording on the coastal cliffs near Pendeen (10/380358) on the north coast. The underlying rock is granite. We met in the small car park near the lighthouse and walked in an easterly direction towards the beautiful Portheras cove (10/388357), encountering a number of nice flush areas that were good for *Osmunda regalis*. Beside the cove was an old stone-walled building used by fishermen, where we found many healthy specimens of *Asplenium marinum* growing in the exposed walls.

We took lunch overlooking the cove before crossing the stream and walking on to the high cliffs at Chypraze Cliff (10 391360). Beside the stream we found a large patch of *Equisetum* × *litorale*. The fern highlight of the day came when a small cave in the cliff was stumbled upon and a small patch of *Trichomanes speciosum* gametophyte was discovered.

Penjerrick Garden, South Cornwall – 20 August

Penjerrick Garden (10/780309) is a sheltered garden situated near Falmouth in South Cornwall. It boasts many magnificent tree ferns and other interesting ferns and plants. The garden has a particular charm in its semi-wild state and it is also very atmospheric, especially when walking beneath the dense canopy on a misty wet day.

A group of five of us were present for this meeting. In the gateway area we found *Dryopteris affinis*, *D. filix-mas*, *D. borreri* and *Polystichum setiferum*. As we walked into the garden there was *Pteris cretica* growing naturalised in the path edge. Later we found much more of the *Pteris* in walls where the old fernery existed. Throughout the garden were many fine specimens of *Dicksonia antarctica*, together with an abundance of self-set plants. We spent some time looking at these, practising our ID skills in separating the young *D. antarctica* from native ferns. In the damp lawns we found *Selaginella kraussiana* before crossing the footbridge to the lower part of the garden.

Here we quickly passed a wasps' nest where large fronds of *Dicksonia* overhung the sunken path. In this part of the garden there were many fine tree ferns dating from plantings in the 19th century. Around the pond and streamside *Woodwardia radicans* and *Osmunda regalis* dominated. As we explored so it began to rain and as it quickly became heavier we decided to head back to the cars for an early lunch. On the return walk we passed through the gate into the lower lane where *Cystopteris* is plentiful in the damp Cornish hedge banks. At this location *Cystopteris fragilis* has been known since 1961 but since the discovery of *C. diaphana* elsewhere in Cornwall, the *Cystopteris* at Penjerrick has also been determined as *C. diaphana*.

Following lunch the rain continued and most people went home. A few continued to explore the lowest part of the garden. It was nice to see many plants of *Polystichum polyblepharum* naturalised in the garden. A search outside the garden revealed that this fern has now become naturalised in the Cornish hedge banks of the adjacent field. Material of possible hybrids with *P. setiferum* was collected but on close examination all turned out to be *P. setiferum*. A fine plant of *Dryopteris* × *complexa* nothosubsp. *complexa* was seen, as well as many non-typical *D. affinis*.

Polypodium Workshop, Saltash, East Cornwall – 11 October

At the Botanical Cornwall Group annual meeting in January a number of people had expressed interest in a workshop focusing on the identification of *Polypodium* species; this meeting was in response to that interest. Twelve of us, with representatives from Somerset, Devon and Cornwall, met in the church hall of St Stephens parish church, Saltash. Specimens of *Polypodium vulgare*, *P. interjectum* and *P. cambricum* were available, together with *P.* × *mantoniae*, *P.* × *font-queri* and *P.* × *shivasiae*, and we spent the morning learning about the differences between them. Microscopes were available and we examined the sporangia, counting basal and indurated cells and looking for other signs of hybridity.

After lunch in the church hall, we took a walk in the warm October sunshine to the creek-side hamlet of Forder (20/412581). We aimed to put our newly found *Polypodium* ID skills into practice in the field! In the Saltash area *P. cambricum* is frequent on walls and specimens were found close to the hall. Beside the river near Forder we found both *P. vulgare* and *P. interjectum* as well as *P. cambricum*. The last two were found growing together epiphytically. On the woodland floor a patch of *Polypodium* was found that in the field looked to be a good candidate for *P.* × *mantoniae* but on later examination turned out to be *P. vulgare*. During the walk we collected a number of specimens, which were microscopically examined on our return to the hall. The day proved to be very enjoyable and the one thing we learnt was that to be certain of the ID of a *Polypodium* one needs to examine the characters microscopically.

SCOTLAND

Frank McGavigan

Glasgow – 22 March

(*Participants*: Adrian & Janet Dyer, Roland Ennos, Yvonne Golding, Grant Fortune, Tim Godfrey, Pieter Kastelein, Frank Katzer, Bridget Laue, Paul Sharp, Richard Lewis, Frank McGavigan, Heather McHaffie, Frances MacKenzie, Christine Nicholson, Geoff Stephenson, Alastair Wardlaw, Maurice Wilkins.)

Was it the chance to see the newly restored Kibble Palace at Glasgow Botanic Garden or the opportunity to sample Jackie Wardlaw's baking that led to a record turn-out? I will never know, but both were magnificent. The Kibble Palace, a large, Victorian, circular glasshouse, has with the help of a Lottery grant been completely dismantled and rebuilt, and more to the point for us, replanted, mostly with ferns from exotic regions of the world. *Osmunda javanica*, *Cibotium chamissoi* (from Hawaii), *Polystichum lentum* (from India), *Humata repens* (from Australia and Asia), *Microlepia strigosa* (the lace fern), *Cyathea dealbata* (New Zealand's national emblem), *Dicksonia arborescens* (from St Helena and the type of *Dicksonia*, although it doesn't look much like others of its genus), *Thyrsopteris elegans* (endemic to the Juan Fernandez Islands) and *Equisetum myriochaetum* (the giant horsetail) were just a few I took note of. As always it is pointless listing everything as a mere list cannot do the collection justice. I would urge you to visit for yourself.

photo: A.F. Dyer

Kibble Palace, Glasgow

After viewing the insectivorous plant house (there is definitely a murderous streak among pteridologists) we toured the rest of the glasshouses, which hold collections of orchids and begonias as well as more ferns, on our way to GBG's hidden gem, its filmy fern house, which is not normally open to the public. Here the drooling was audible, not only over *Leptopteris superba* (the Prince of Wales Feathers fern from New Zealand) and our own *Trichomanes speciosum* (good to see the sporophyte and not just gametophytes), but other gems such as *Lastreopsis hispida* (with black bristles on the rachis) and many more.

Then it was on to Alastair Wardlaw's garden in Bearsden to view his collection of hardy ferns. I say hardy but many that he coaxes through the winter struggle to survive for me, only a few miles away, for example, *Blechnum fluviatile* and *Lophosoria quadripinnata*. I don't even attempt tree ferns whereas Alastair has several that appear to flourish with the minimum of winter protection (e.g. *Cyathea smithii*, *Dicksonia antarctica*, *D. fibrosa*, *D. lanata* and *D. squarrosa*). Even perfectly hardy ferns such as *Dryopteris aemula* are battered and forlorn in my garden, whereas they were in pristine condition in Alastair's. So even at the end of March it was well worth the visit with winter-green asplenium, blechnums and polystichums in abundance and still in prime condition.

Lunch, prepared by Jackie, was delicious as always. For his part Alastair had pressed specimen fronds of the various members of the *Dryopteris affinis* agg. for those who were interested in learning the differences. Then we had PowerPoint presentations, from Heather on ferns in unusual places (including the RBGE's by now famous bog fern – see the *Pteridologist* 2008) and from Yvonne on the BPS trip to La Réunion, featuring in particular *Cyathea borbonica*, which does not even get a mention in Large and Braggins' otherwise excellent book on tree ferns. Then more food from Jackie (how does she do it?) to finish off a most satisfying day.

Aberfeldy, Perthshire – 28 June

(*Participants*: Frank Katzer, Frank McGavigan, Chris Nicholson.)

We began and finished the day with coffee at the excellent Watermill bookshop and café in Aberfeldy. In between we effortlessly notched up 18 taxa. First we walked the circuit of the Birks of Aberfeldy (car park at 27/854486) on a well-made path up and around the gorge of the Moness Burn. Birk is an old Scots word for birch, but the dominant tree at the bottom of the glen was beech, as always casting shade too deep for much else to grow. Where some light penetrated there was the occasional plant of *Dryopteris dilatata* and patches of *Pteridium aquilinum*. At higher altitude the beech was replaced by mixed woodland, mainly oak, allowing not only far more ferns to flourish but a wider range of species. We soon found, without straying from the path, *Gymnocarpium dryopteris* and *Phegopteris connectilis*, *Athyrium filix-femina*, *Blechnum spicant*, members of the *Dryopteris affinis* agg. (which we didn't attempt to distinguish), *D. filix-mas*, *Polypodium vulgare* and *Polystichum aculeatum*. Higher up at last the birks came into their own and we added *Oreopteris limbosperma* to our record card. Crossing the upper bridge over the burn and viewing a magnificent waterfall, we found a lot more beech and oak fern on our way back down the other side of the glen. Here we also added *Cystopteris fragilis* and *Asplenium trichomanes*, but sadly not any filmies, despite looking in some likely spots. Finally, almost back to the car park we sighted what at first we thought was *Equisetum sylvaticum* but which turned out to be the shade variant of *E. arvense* (certainly more attractive than the stuff that proliferates in my garden).

We then drove the short distance to the north side of Schiehallion, one of our best known mountains, to one of only two sites for *Gymnocarpium robertianum* in Scotland. At 27/7159 5728 there are a few grykes near an old limestone quarry, and in one of these two clumps flourish. How they got there and why they haven't spread further remain a mystery. Nearby there were *Asplenium viride*, *A. trichomanes*, *Cystopteris fragilis*, and appropriately *Geranium robertianum*. On the way back we stopped on the shores of Loch Kinardochy (27/774551) to inspect the *Dryopteris carthusiana* that Frank Katzer had amazingly spotted earlier from the car travelling at 40mph. Returning to Aberfeldy, we went for a stroll in this pleasant town, and found on a wall *Asplenium scolopendrium* and a very crested *Dryopteris*. Clearly not planted in the wall this was a self-sown sporeling, now a sizeable plant. Who says fancy forms of ferns can't still be found in the wild?

Attadale, Strathcarron, Wester Ross (18/926392) – 30-31 August

(*Participants*: Tim Godfrey, Roger Golding, Yvonne Golding, Bridget Laue & Paul Sharp, Howard Matthews, Frank McGavigan, Frances MacKenzie, James Merryweather, Chris Nicholson, Paul Ripley, Geoff Stephenson, Mike Taylor, Maurice Wilkins.)

Mr and Mrs Macpherson of Attadale had kindly let us use their dining room for a PowerPoint presentation by James Merryweather as an introduction to our theme for the weekend – differentiating the male ferns of Britain. James explained how the separate species had come about and elucidated some of the distinguishing features of each. But not until we were out in the field examining live plants did we realise just how difficult our task was, and this was our first lesson i.e. it isn't easy, particularly making confident identification of the three species in the *Dryopteris affinis* agg. Secondly, there is no one clear, distinguishing feature for each species (even the famous black spot is not reliable): a suite of characters has to be examined and a 'best fit' made. Thirdly, there are lots of hybrids to confuse the issue, and fourthly, there are always plants that don't seem to fall neatly into any species and on several occasions we had to give up trying. Indeed, 'Walk on by' became our unofficial theme tune. James insisted that it gets easier with practice and I daresay he is right, but to ask the average fern enthusiast to record consistently and accurately *Dryopteris affinis*, *D. borreri* or *D. cambrensis* is being unrealistically optimistic. Some of us still have difficulties with *D. filix-mas* and *D. oreades*! But I suppose we will have to keep trying.

We spent the morning of Saturday in and around Attadale itself, examining various *Dryopteris* plants and trying to gain a clearer understanding of the differences. The task was complicated by the fact that the *D. cambrensis* that James had lined up for us to see had been strimmed away in verge clearing by the local roads department. However, *D. affinis* and *D. borreri* were in abundance, as were *D. filix-mas* and *D. dilatata*. We also noted *Athyrium filix-femina*, *Blechnum spicant*, *Gymnocarpium dryopteris* and *Polypodium vulgare*, and on old walls *Asplenium ruta-muraria* and *A. trichomanes*.

In the afternoon we drove to Leacanashie (18/8535) on the other side of Loch Carron where we identified more *D. affinis* and *D. borreri* but no *D. cambrensis*. Also recorded were *Athyrium filix-femina*, *Blechnum spicant*, *Polypodium vulgare*, and, most unusually, sporing bracken. Unlike in the rest of Britain, 2008 was a beautiful summer for the north of Scotland, and we concluded that the warm weather had encouraged the sporing. We moved on to a rocky hillside on the Glenmore Estate (18/868406) to examine *D. oreades* (noting that the sori covered only half the pinnule surface, a key characteristic). We also ticked off *Oreopteris limbosperma*, *Phegopteris connectilis*, *Blechnum spicant*, *D. affinis*, *Polypodium vulgare* and *Pteridium* (this time not sporing, perhaps because of the higher altitude).

photo: R. Golding

James Merryweather investigating *Dryopteris affinis*

The evening was spent dining at Attadale where we had been invited as guests of Mr and Mrs Macpherson. Locally smoked salmon, Attadale's own venison stew, blackcurrant cheesecake, and locally produced cheeses, washed down with fine wine, all made for a convivial evening, and indeed was the highlight of the weekend for some.

The next day Geoff Stephenson took us on a tour of Attadale Gardens with its carefully created vistas, spectacular sculptures, and beautiful plants that have to be tough enough to withstand the harsh winters, gale force winds and late spring frosts of northern Scotland. Our real interest was of course in the ferns of which there is an extensive collection: native species and varieties and several exotics, including tree ferns (protected in a geodesic glasshouse). I was particularly struck by *Dryopteris darjeelingensis*, now with the more mundane name of *D. gamblei*, but of course there were many more of interest. The gardens are open to the public, so go and see for yourself, but I cannot guarantee that you will be given the opportunity to take away a fern of your choice for free, as we were.

Finally, on Sunday afternoon, we went to the limestone crags at Glasnock (18/861442). On the walk up the hillside in more acid territory we noted the usual species – *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis*, *D. oreades*, *Oreopteris limbosperma*, *Phegopteris connectilis*, *Polypodium vulgare* and *Pteridium aquilinum*. Then suddenly, when the limestone was reached, *Polystichum lonchitis* became abundant, accompanied by *Asplenium ruta-muraria*, *A. trichomanes*, *A. viride*, *Cystopteris fragilis*, the occasional plant of *Polystichum aculeatum*, and *Selaginella selaginoides*. None of these presented an identification problem, which came as a relief after our struggles with the male ferns. So it seemed a good idea to end our weekend on a high, before the threatening rain became a reality.

Woodsia alpina Monitoring, Beinn an Dothaidh, Argyll – 13 September

(*Participants*: Cliff Davies, Frank Katzer, Frank McGavigan, Heather McHaffie.)

Monitoring known *Woodsia alpina* sites has become an annual task for the Scottish group, based on the survey carried out in the 1970s by John Mitchell, who marked up Polaroid photos of each site. (This useful technique is no longer possible, but on the other hand modern GPS receivers mean that the location of sites can be more accurately identified.)

Starting at Achallader Farm (27/323443) we made our way up the very muddy path into Coire Achaladair to a site not included in the Mitchell survey where a single plant had been recorded in 1992 (27/333416). We could find no trace of it. We know that *W. alpina* is sensitive to both drought and excess water (plants are usually tucked under an overhang protected from torrential rainfall), but its disappearance could have been due to any number of causes. So a disappointing start, but we did record in the vicinity *Dryopteris expansa*, *Polystichum lonchitis*, *Asplenium viride*, *Cystopteris fragilis* and *Huperzia selago*. Then we moved on to a John Mitchell site, recorded in 1978, or rather two colonies side by side. Here *W. alpina* was very much in evidence and we were able to draw up detailed comparisons with the earlier record:

***Woodsia alpina* – Colony N1 – Beinn an Dothaidh (N) – Grid Ref. 27/3324 4139**

Tuft number		Estimated no. plants		Total no. fronds		Length of largest frond	
1978	2008	1978	2008	1978	2008	1978	2008
1		1	1 or 2	c.6	7	Medium	Medium
2		3	1	c.16	c.15	Medium	Medium
3		1	1	c.8	3	Medium	Small
4		1	2 or 3	c.2	16	Small	Medium
5		1	2	c.6	c.9	Medium	5.0-6.0cm
6		2	2	c.10	6	Medium	V. small
7		2	1	c.11	5	Medium	Small
8		2	1	14	11	2.5cm*	5.0cm*
9		1	2	5	11	6.0cm*	3.0cm*
10		1	2	5	6	4.0cm*	3.0cm*
	11	-	1	-	8	-	Medium
	12	-	1	-	5	-	Small

* On both occasions, only 3 tufts could be examined closely

***Woodsia alpina* – Colony N2 – Beinn an Dothaidh (N) – Grid Ref. 27/3324 4137**

Tuft number		Estimated no. plants		Total no. fronds		Length of largest frond	
1978	2008	1978	2008	1978	2008	1978	2008
1		2	1	28	c.45	6.5cm	6.0cm
2		2	2	c.16	c.21	Large	8.0-10.0cm
3		1	-	c.3	-	V. small	-
4		1	1	c.7	10	V. small	Small
5		1	-	10	-	5.0cm	-
6		1	-	c.8	-	Medium	-
7		2	-	c.12	-	Large	-
	8	-	1	-	10	-	Small
	9	-	1	-	12	-	Small

In addition we found one plant between the two colonies (eight fronds, small to medium size).

What conclusions can we draw? Certainly in 30 years there have been changes: some plants have diminished or disappeared altogether, especially in Colony N2, but on the other hand new plants have appeared, and, if we compare the total number of fronds between 1978 and 2008, we find there has been an increase of some 16%. Perhaps we should not read too much into this apparent good news; weather conditions can vary from year to year with dry weather desiccating fronds so that they disappear, at least temporarily until the plant can access rainwater seepage again, or permanently if dry conditions persist (2008 was a particularly wet year.) We will need to keep monitoring, but in the meantime we should be glad that this little bit of Britain's diverse but threatened nature is thriving.

Linn Botanical Garden, Cove, Argyllshire – 4 October

(*Participants*: Billy Alexander, Tim Godfrey, Charlotte Karsemejer, Frank McGavigan, Chris Nicholson, Maurice Wilkins, Jim & Jamie Taggart.)

Of the many beautiful gardens along the western seaboard of Scotland with fine fern collections (e.g. Logan, Culzean, Brodick, Ascog, Benmore, Arduaine, Attadale, Inverewe, etc.), probably the least well known is the privately owned Linn Botanical Garden (26/223826), tucked away as it is on the little peninsula that lies between the Gare Loch and Loch Long. But Linn is different and worth taking the trouble to find. At first sight it appears an overgrown jungle but you soon realise the garden is crammed with exotic and unusual plants – even the brambles are Chinese (*Rubus henryi* particularly caught our eye). Indeed we could easily have missed many gems if they had not been pointed out by Jamie Taggart, who runs the garden with help from its founder, his father, Jim.

Jamie has planted specimen ferns in carefully chosen sites where they will thrive – *Cyathea smithii* in the gorge of the stream for protection and moisture, and *Trichomanes speciosum* and *Leptopteris superba* next to the waterfall. Usually it is a case of siting tree ferns on a slope and away from a potential frost pocket, in other words in a position that best suits the fern rather than the visitor, but that makes it all the more exciting when you catch a glimpse of some rarity. And rarities there are aplenty: *Blechnum wattsii* and *B. nudum* from Australia, *B. palmiforme* from Tristan da Cunha and the Gough Islands, *B. colensoi* from New Zealand, *B. tabulare* from South Africa (as well as the now common *B. chilense*), *Culcita macrocarpa* from south-west Europe and the Atlantic islands, *Cyathea australis*, *C. dregei* from southern Africa, *C. smithii* and the better known *C. dealbata* from New Zealand, *Dicksonia berteroana* and *Thyrsopteris elegans* (both endemic to the Juan Fernandez Islands), *D. sellowiana* from Central and South America, and of course *D. antarctica*, *D. fibrosa* and *D. squarrosa*, *Sadleria cyatheoides* from Hawaii, *Todea barbara* from Australia, New Zealand and southern Africa, *Pyrrosia rupestris* (surviving unprotected for four winters so far), a finely cut *Araiostegia* species that Jamie reckoned would not be hardy even at Linn, unlike all the others I've mentioned. The list would be a lot longer but by this time the persistent rain that accompanied us had made my notebook a soggy mess.

From memory, other more common ferns were *Woodwardia radicans* and two different versions of *W. unigemmata*, several *Blechnum penna-marina* from separate geographical locations, *Matteuccia orientalis*, *Onoclea sensibilis*, *Cystopteris diaphana*, the Mediterranean variant of *Asplenium ceterach* as well as our local one, a splendid island of *Osmunda regalis* in the middle of the pond, several versions of *D. wallichiana* or *wallichiana* hybrids, *D. lepidopoda* (whose fronds emerge pink), *Pellaea rotundifolia* (thriving outside), *Polypodium scouleri*, and the not-so-common hybrid between *P. cambricum* and *P. vulgare*, *P.* × *font-queri*. Jamie allows *Polystichum aculeatum* to self-sow and flourish but treats *Athyrium filix-femina* as a weed. All of these ferns are intermingled with other exciting plants too numerous to mention. We were particularly taken with the leaf colour and shape of several epimediums of Chinese origin, perfect companion planting for ferns.

However, by this time we were all thoroughly soaked, so the lunch provided by the Taggarts in front of a magnificent log fire was very welcome. They also made sure we went home laden with ferns and other plants. Needless to say, as we left, the sun came out, but we'll be back.

Group of European Pteridologists (GEP) Excursion

Austria – 19-23 July **Arnaud Bizot & Michel Boudrie**

The 2008 GEP meeting was co-organised by Ronnie Viane and his wife Lien Van den heede, together with Christiane Baumann and Franco Passarello. A group of 15 enthusiastic pteridologists met in the small town of Miesenbach, at the foot of the Schneeberg (Snow Mountain), about 60 kilometres SSW of Vienna in Lower Austria (Niederösterreich). Members from Austria, Belgium, Bulgaria, France, Germany and Italy were present, but unfortunately our friends from the UK could not attend this time. One of the major objectives of the meeting was to study members of the *Asplenium trichomanes* complex.

We went first to the Hausberg, situated just east of Miesenbach at c. 575 metres. Along a forested trail, bordered by calcareous outcrops and passing into a narrow gully, we noticed in rock crevices various *Asplenium trichomanes* subspecies (*pachyrachis*, *quadrivalens*, *inexpectans*) and possible hybrids, *A. viride*, *A. ruta-muraria*, *Cystopteris fragilis*, *Dryopteris filix-mas*, *D. dilatata*, *D. carthusiana*, *Athyrium filix-femina* (rare), *Polystichum aculeatum*, *P. lonchitis* (rare) and *Polypodium interjectum*. The presence of subsp. *inexpectans* and nothosubsp. *tadei-reichsteinii* (= *A. trichomanes* subsp. *inexpectans* × subsp. *pachyrachis*) had been confirmed by Ronnie in 2007. During this visit, Arnaud Bizot found another hybrid: *A. trichomanes* nothosubsp. *lucanum* (= subsp. *inexpectans* × subsp. *quadrivalens*).

The afternoon was occupied by visiting the very interesting site at the *locus classicus* of *A. trichomanes* subsp. *inexpectans*: a narrow limestone gorge at c. 500 metres, close to the town of Gutenstein. Some very rare hybrids were observed, such as *A.* × *bavaricum* nothosubsp. *adulteriniforme* (*A. trichomanes* subsp. *inexpectans* × *A. viride*) and *A. trichomanes* nothosubsp. *melzeranum* (*A. trichomanes* subsp. *hastatum* × subsp. *inexpectans*), close to all their parents and all growing together in crevices of calcareous rock or on old walls. Under an overhanging cliff above the road we later also found subsp. *pachyrachis*.

Due to favourable weather conditions, the second day was devoted to the Schneeberg Mountain. The original Salamander rack-railway took us safely and in about 30 minutes to the highest train station in Austria (1,795 metres). Along the path to the top of Schneeberg, nice *Botrychium lunaria* and *Selaginella selaginoides* were seen in the grass. *Asplenium viride*, *Polystichum lonchitis*, *Cystopteris alpina* and *C. fragilis* were growing in the crevices of the limestone rock. When a chilly wind came up around noon, everybody took refuge in the restaurant on the top (2,075 metres) for a hot soup. After lunch we found some extensive populations of *Huperzia selago* in the grassy slopes, as well as *Lycopodium annotinum*. Before going down to the bottom of the valley along the rather steep western slope ('Fadensteig') covered by unstable screes, we saw *Cystopteris montana* and *Dryopteris expansa*. Some *Asplenium ruta-muraria*, *A. viride* and *A. trichomanes* were growing in sheltered situations. At the upper forest edge (c. 1,330 metres), *Gymnocarpium dryopteris*, *Dryopteris expansa* and *Athyrium filix-femina* were growing in a thick layer of humus overlaying the limestone rock.

The last day was spent exploring the dolomitic cliffs above the village of Zweiersdorf in the Hohe Wand massif. Here, Albert Nieschalk had found the exceptional hybrids *A.* × *reuteri* nothosubsp. *stiriacum* (*A. lepidum* subsp. *lepidum* × *A. trichomanes* subsp. *inexpectans*) and *A.* × *reuteri* nothosubsp. *aprutianum* (*A. lepidum* subsp. *lepidum* × *A. trichomanes* subsp. *quadrivalens*). Unfortunately none of these hybrids was noticed, but we found good specimens (all checked by flow cytometry) of *A. trichomanes* subsp. *inexpectans*, next to subsp. *hastatum*, subsp. *pachyrachis* and their hybrid *A. t.* nothosubsp. *moravicum*. *A. viride* and *A. ruta-muraria* subsp. *ruta-muraria* were growing abundantly, as well as *Gymnocarpium robertianum* at the base of the cliffs and in the screes. In a particularly humid spot, a nice population of *Asplenium scolopendrium* was thriving. Then the trail followed vertical dolomitic cliffs hosting populations of *A. lepidum* subsp. *lepidum* and the common wall-rue. Their hybrid, *A.* × *javorkae* nothosubsp. *javorkae*, was occasionally observed *inter parentes*.

HORTICULTURAL SHOWS

SOUTHPORT FLOWER SHOW – 21-24 August

Michael Hayward

The 75th Anniversary Southport Show had a slow start due to very wet poor weather which had caused the cancellation of the Royal Lancashire Show in August for the second year running. Attendances increased as the week progressed, to around the target of 100,000. Many improvements to the drainage and surfacing have been carried out on the Victoria Park site over the last few years, and this year a much needed new set of Sign Boards were provided for the Amateur Societies. We also took the opportunity to revamp the style of our stand, with a raised platform at the back for the notice board, potted ferns and vases of fronds, thus improving the appearance.

The theme for the 2008 show was 'Liverpool' and to celebrate this we had our own Liver bird (*syn.* Pterodactyl) perched over our displays. Over 20 members (including the helpers) visited the stand this year and a number of new members were recruited to the Society. A new leaflet on the care of tree ferns in the north of England was popular with visitors, the care of tree ferns being one of the more frequent topics we are asked about. A demonstration of propagation methods was, as always, popular and a display of BPS cards and other goods for sale as always proved another eye catcher.

The number of entrants in the fern classes continues to slowly increase and a very large variety of fern species and cultivars were displayed in the competitive classes this year. The BPS challenge cup was again won by Brian Russ and the Happiland trophy by Harvey Shepherd. The judge of the fern classes was Ursula Key-Davis. Prize-winners are listed below.

Class 8 Individual Championship: Four Hardy British Ferns (dissimilar), two Greenhouse Ferns (dissimilar) and two Foreign Ferns Hardy in Great Britain: 1st B. Russ, 2nd Y. Golding, 3rd M. Hayward (4 entries)

Class 9 Three Hardy British Ferns (distinct species, not varieties): 1st H. Shepherd (2 entries)

Class 10 One Foreign Fern Hardy in Great Britain: 1st Y. Golding, 2nd O. Fairclough, 3rd H. Shepherd (6 entries)

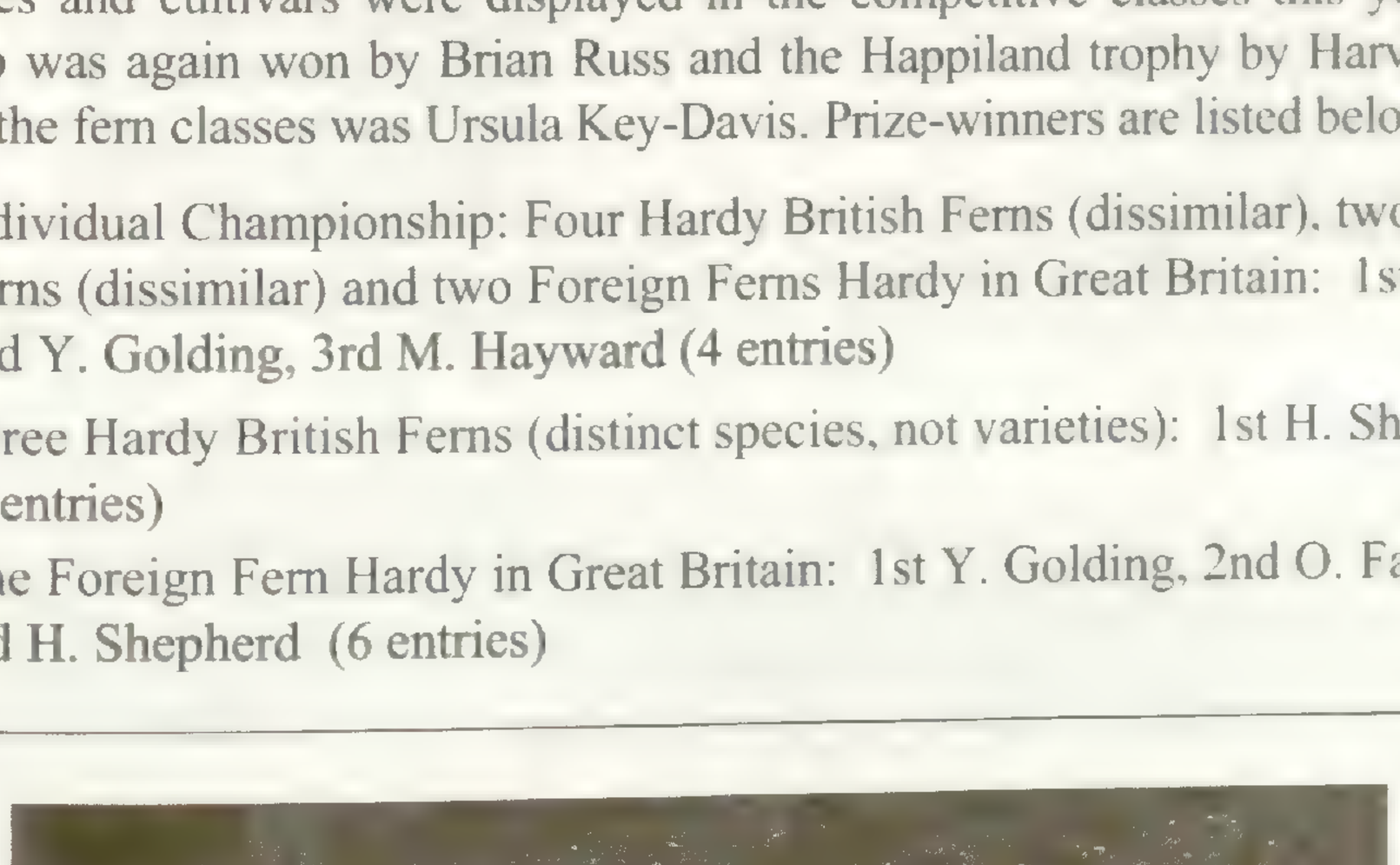


Photo: R. Viane

GEP 2008

Standing: Elsa Soster, Christiane Baumann, Carlo Argenti, Agnes Boudrie, Sandra Argenti, Arnaud Bizot, Pascal Holveck, Franco Passarello, Angelika & Rolf Thiemann, Ronnie Viane
In front: Lien Van den heede, Mario Soster, Michel Boudrie, Daniella Ivanova

Class 11 Three *Polypodium* (3 distinct varieties): 1st Y. Golding (1 entry)

Class 12 Three *Polystichum* (3 distinct varieties): 1st H. Shepherd (2 entries)

Class 13 Three *Athyrium* (3 distinct varieties): 1st Y. Golding (1 entry)

Class 14 Three *Asplenium* excluding *A. scolopendrium* (3 distinct varieties or species): 1st H. Shepherd (1 entry)

Class 15 One British Fern (any genus or variety): 1st H. Shepherd, 2nd Y. Golding, 3rd I. Rawson (3 entries)

Class 16 One Greenhouse Fern: 1st J. Abbott, 2nd R. Hamish, 3rd P. Steward (7 entries)

Class 17 Three *Asplenium scolopendrium* (3 distinct varieties): (no entries)

My thanks go to Ruth Berry Piearce, Robert Crawford, Roland Ennos, Ann Gill, Alec Greening, Linda Greening, Yvonne Golding, Trevor Piearce, Martin Rickard and Harvey Shepherd for manning the stand this year. The number of members helping in this way again increased but more would be welcome! My aim is for helpers to spend half of the day manning the stand and the other half viewing the show. Sleep-overs can be arranged for anyone coming from a distance and we usually arrange social activities in the evening. You save your entrance fee and car parking fees by helping on the stand. The dates for next year's show are 20-23 August.

photo: R.B. Piearce

BPS stand, Southport Flower Show 2008
Trevor Piearce, Ann Gill, Michael Hayward

In addition to having a stand at the Southport Show, the Society is planning to have a stand at the RHS Tatton Park Flower Show, 22-26 July 2009. Volunteers will be needed for each day of the show (free entrance) and details can be had from Yvonne Golding who has taken the lead in this new venture. The format of the stand will be very different at Tatton but the time spent on the stand should be equally enjoyable. Yvonne and I will both be able to provide sleep-overs for helpers at the Tatton Park Show. This is a great opportunity to bring the activities and membership benefits of our Society to a wider public.

SECRETARIAL NOTES

Please note: *names and contact details of all officers can be found on the inside of the front cover of this* Bulletin.

ANNUAL GENERAL MEETING 2009 – The 106th AGM will take place on Saturday 4th April 2009 at The University of Manchester Museum, Oxford Road, M13 9PL at 2p.m.

SUBSCRIPTIONS 2009 – Members are reminded that subscriptions were due on 1st January 2009 and should be paid to the Membership Secretary. Cheques should be made payable to 'The British Pteridological Society'. Current rates are given inside the front cover of this issue. Payment can be made by **Credit Card** – see renewal form. **Standing Order** forms are printed on the reverse of renewal forms and are also available from the Membership Secretary and the BPS website (www.eBPS.org.uk). Standing Orders may be paid on 1st January or 1st February. In either case, membership is deemed to be from 1st January to 31st December.

Members are reminded that according to Clause 11 of the Constitution "Any member whose subscription is unpaid within six calendar months of it becoming due shall be liable to have his/her name removed from the list of members of the Society."! Defaulting members who do not amend their Standing Orders with their bank and are still paying at the old rate shall be notified that they will not receive the *Fern Gazette* until such time as their Standing Orders are updated. Members still paying even earlier rates shall be notified that their name will be removed from the Membership List until such times as Standing Orders are updated or cancelled. Any monies received from old Standing Orders will be treated as a donation.

GIFT AID – Since 2003 the BPS has been a registered charity. This enables us to claim back from the Inland Revenue 20p for every pound paid in the annual subscription for each member who authorises us to do so. Over 200 members have authorised us to claim Gift Aid on their behalf, which has brought in over £1,000 each year. While this is obviously an extremely valuable addition to the Society's annual income, it could be considerably more. There are probably a further 200 members on whose subscriptions the Society could claim Gift Aid if these members authorised it and this could lead to perhaps another £1,000 per annum. All that is required is a minimal amount of form filling (about one minute) and a second class stamp. **Even better, the form has only to be filled in once.** The forms are retained by the Gift Aid Secretary and the same ones used year after year to make the claim.

The small number of provisos is set out below:

1. Gift Aid is available only to members who reside in the UK.
2. Members on whose subscription Gift Aid is claimed must be paying income tax or capital gains tax at least equal to the amount claimed.
3. Members whose subscriptions are allowed as an expense in connection with their employment may not claim Gift Aid.

If the Inland Revenue allows us to claim relief on your membership subscription please authorise us to do so. It's the equivalent of a yearly £4 donation to the Society.

DIRECT DEBIT – The Society does not offer a Direct Debit facility for subscriptions. The reasons are two-fold. Expensive software is required to create a direct debit tape to send to the bank and is too expensive for a small Society like the BPS. With Standing Orders the bank does all the administration, whereas with Direct Debits a considerable additional workload would fall on the Society, in particular the Treasurer, and it is necessary to bear in mind that all officers offer their time and services on a voluntary basis.

E-MAIL ADDRESSES – These are published in the Membership List "for members who have a relatively stable e-mail address and who keep up-to-date with their messages". A supplementary list and amendments are published in the *Bulletin*. Members who wish to have their e-mail address added, changed or removed are requested to inform the Membership Secretary BY E-MAIL.

NOTIFYING CHANGES OF ADDRESS – Please inform the Membership Secretary of changes of address and telephone number. He will be responsible for notifying any other officers and appointees who need to know.

PUBLICATIONS BY AIRMAIL – Our journals can be sent by airmail to overseas members, provided that they advise the Membership Secretary and pay an additional subscription to cover airmail postage. See inside front cover for rates.

E-BPS DIARY SYSTEM – On our website there is a new eBPS Diary System in place, enabling us to see all the Society's events on one calendar. With meetings happening all over the country it is only too easy for events to overlap; we hope the diary system will help to alleviate this and be a useful planner for members. The system relies on regular updates so please send details of your BPS events to the Committee Secretary, Graham Ackers.

CODES OF SAFETY, CONDUCT AND DECLARATION FORM – All members attending Society field meetings should be aware of the Society's *Safety Code* (see 2000 *Bulletin* 5(5): 275), as well as the *Code of Conduct for the Conservation and Enjoyment of Wild Plants* (see 1999 *Bulletin* 5(4): 199), and are required to sign a Declaration form. Copies of these documents can be obtained from the Meetings Secretary or BPS website.

GREENFIELD FUND – This fund, set up as a memorial to one of our Society's great fern growers, Percy Greenfield, is used to finance approved projects, helping with the cost of necessary equipment, books and travel expenses. Percy Greenfield's interest leaned very much towards the non-scientific side of our activities and it is felt that he would have wanted this taken into consideration when decisions are made. Workers eligible for university or college grants and similar support are not therefore eligible for help from the fund. Applications will normally be dealt with once a year and should be submitted by 1st November. Anyone wishing to apply for this funding should contact the General Secretary for further information.

CENTENARY FUND – This fund is used to promote the study of all aspects of pteridophytes – horticultural, scientific and educational, whether by amateurs, students or professional pteridologists. As such its scope is much broader and more flexible than the Greenfield Fund. Applications will normally be dealt with once a year and should be submitted by 1st November. Anyone wishing to apply for this funding should contact the General Secretary for further information.

THE J.W. DYCE AWARD – This award was set up to honour the memory of Jimmy Dyce who was a member from 1935 until his death in 1996. During this time he held all the key committee posts, virtually single-handedly saved the Society from extinction after the war, and contributed in so many other ways to shape the Society as it is today. The second J.W. Dyce award will be made at the AGM 2009 to the author(s) of the best paper, article, book or other substantial piece of work published during 2008 in any of the three BPS journals, on the BPS website, or as a special publication. Winning entries, other than books, will be placed on the website for all to read. The award, which is a cash prize of £100, is open to everyone, whether professional or amateur, pteridologist, horticulturalist or fern enthusiast.

MEMBERS' INFORMATION SERVICE – Members often require information and advice on many aspects of pteridophytes but are reluctant to ask or simply do not know where to obtain help. Queries from members on any aspects of the biology, identification or cultivation of ferns should be sent, with three first class stamps, to the Horticultural Information Adviser.

FOREIGN FERN SOCIETY JOURNALS HELD BY THE SOCIETY - The Society exchanges journals with a number of other fern societies in the world. We have a collection from societies in America, Australia, New Zealand, India and the Netherlands. If members would like to browse these please contact Tim Pyner (t.pyner@btinternet.com) who now holds the stock.

READING CIRCLE – The Society operates a reading circle for the *American Fern Journal*, a quarterly publication containing much information for those seriously interested in ferns. The *Fiddlehead Forum*, which publishes many 'ferny' items of interest to the amateur grower, accompanies it. To receive these journals contact the Horticultural Information Adviser.

BACK NUMBERS OF JOURNALS – We have a large number of back issues of our journals and it is a shame that more members of the Society do not avail themselves of them. Those that do frequently tell me they wished they had done so long ago as they contain a wealth of fern material. They can be obtained from the Back Numbers Organiser Pat Acock who will gladly lighten his loft. You can have a sample pack for £6 including postage.

NEW! SPECIAL PUBLICATION No. 10 – *The Occasional Paper of The British Pteridological Society*, originally published in 1875 and reproduced by Michael Hayward. See the Publications Secretary's report for more details (p. 77). Copies are available from Pat Acock for £2.50 + postage (inland £0.75, Europe £1.00, world printed papers £1.25).

BPS FIRST MINUTE BOOK – This historical document containing the Committee Minutes from the inception of the Society in 1891 to 1983 is available in full colour on a CD ROM at £10 per copy, including postage. Place your order with Pat Acock.

BPS WEBSITE – www.eBPS.org.uk (hosted by The Natural History Museum.) In today's internet-oriented world, it is increasingly important for the Society to see its website as a major means of communication. The website provides information for the membership, but it is also, and perhaps more importantly, a 'shop window' to present the Society and pteridology to the wider world. Our aim is to make our website the premier source on the internet of information about pteridophytes and pteridology. There have been a number of further significant enhancements to the website this year. We are setting up a system of 'content providers' for specific areas of the website which will hopefully improve the quantity of good quality information (see below). Members with views on what the website should provide and with offers to help with content should contact the Website Editor, Anthony Pigott. Good digital photographs of members involved in fern-related activities are always welcome as are suggestions or contributions for wild sites, gardens and nurseries for 'Where to See Ferns'.

WEBSITE CONTENT PROVIDERS – Historically much of the BPS website content has been generated by the Editor, other than some regular updates, such as meetings programmes, spore lists, merchandise, etc., which have been provided by the officer responsible. This has tended to limit the content of the website to what the Editor could generate himself and persuade others to do. Therefore we are now setting up a more comprehensive network of content providers for specific pages and topics in order to increase the quantity of good quality content, as well as spreading the work more evenly. More details and a list of those people who have agreed to be content providers will be published shortly on the website.

AMERICAN FERN SOCIETY – The AFS has had a reciprocal payment arrangement with the BPS for many years through their respective Membership Secretaries. See AFS advert on p. 80.

BRITISH WILDLIFE – Concessionary individual subscriptions to *British Wildlife* magazine are available to BPS members: www.britishwildlife.com. This excellent journal occasionally carries articles on ferns and reviews fern publications. See the excellent review of James Merryweather's AIDGAP identification Key and CD in BW 20(1) October 2008.

ROYAL HORTICULTURAL SOCIETY – Our Society is affiliated to the RHS (www.rhs.org.uk). This enables a limited number of members to enjoy certain privileges in connection with RHS Shows, competitions and services. Some RHS Journals are available free to members at indoor meetings. See *The Garden*, December 2008 for some articles on ferns. Further information is available from the Treasurer.

PAYMENT OF EXPENSES – The Treasurer has *Rules for Seeking Reimbursement of Personal Travelling and Administrative Expenses* by Officers and Members acting on behalf of the Society. Forms for claiming these expenses can be obtained from the Treasurer by phone or e-mail request.

COPYRIGHT – All contributors to the BPS journals and website are required to sign an agreement assigning ownership of copyright of the article, photograph etc. to the BPS. This has the aim of safeguarding the contributors' work from unlawful copying and use. It does not stop contributors from using their own work elsewhere provided that they acknowledge the original source of publication.

MERCHANDISE Do you have a BPS sweatshirt, polo shirt or fleece? These are all dark green with a small embroidered BPS logo in yellow. Other items, such as BPS ties, metal badges, ferny greetings cards, bookmarks, pens, calendars and mugs, are also for sale. Can't find your order form? Contact the Merchandise Organisers or look on the website for details. The Organisers also welcome suggestions for new stock.

BOOKSALES – It has become more difficult to find second-hand fern books at reasonable prices so if you are thinking of selling any of your books please consider first offering them to the Society. Frank would also be pleased to receive any donated or bequeathed books that could then be offered to members at affordable prices. Contact him by e-mail if possible.

SOUTHPORT FLOWER SHOW 20th-23rd August 2009 Why not spend a few hours or a day helping man the Society's stand? You do not need to be an expert on ferns or fern growing, just prepared to spend a few hours or a day with us. Expenses are available, as well as free entry to the Show. Details are available from Michael Hayward, 6 Far Moss Road, Blundellsands, Liverpool L23 8TQ. mhaywardL23@blueyonder.co.uk.

TATTON PARK FLOWER SHOW 22nd-26th July 2009 – For the first time our Society will be represented at this show. Please come along and visit us in The National Plant Societies Marquee. If you have any well grown specimen ferns in pots that you would consider loaning for display at this event or if you would like to help in any way then please contact the General Secretary.

NURSERY ADVERTISEMENTS – Members with nurseries that offer ferns are reminded that they may place an advertisement in the *Bulletin*, *Pteridologist* and on the website, free of charge in return for the inclusion of a note about the Society in their catalogues. The Website Editor can include an image if required. If members wish their nursery to be included, please contact the General Secretary.

PUBLICITY AND MARKETING OFFICER – The Committee would like to establish a new post of Publicity and Marketing Officer. If you would like to help co-ordinate and hopefully expand our activities in this area then we would like to hear from you. Please contact the Committee Secretary for more information.

EDUCATION CO-ORDINATOR – The Society already offers educational opportunities for its members. We would like someone to co-ordinate and expand upon these activities for the general public as well as for our members. We anticipate that any volunteer for this post would have some experience in education. Please contact the Committee Secretary if you are interested in helping to establish this post.

SPORE EXCHANGE – Anne Wright has now retired as Spore Exchange Organiser. Matt Busby is providing this important service for members in 2009. This service could be run by an individual, a couple, or individuals working as a team. If you would like to be involved with the Spore Exchange Scheme, even if it is in a small way then please contact the Committee Secretary, Graham Ackers.

CULTIVAR REGISTRATION SUB-COMMITTEE – Preliminary work began in 2008 and the Sub-Committee is about to commence preparing the first entries in a draft Register of the Cultivars of *Polypodium*. Once the format of the document has been confirmed and building the Register is underway the Society will apply to be registered as the International Cultivar Registration Authority for *Polypodium*. The registration authority has indicated that such an application is likely to be accepted but the Sub-Committee decided to delay application until it was confident of compiling a register that was reasonably comprehensive within about a year of registration and then reasonably confident of being able to keep it up to date. The contact is now Colin Ellis (cpellis39@mac.com), the current Chairman of the Sub-Committee.

NEW REGIONAL GROUP – After contacting all those in the region, a group of BPS members from South Wales and the adjacent counties met on the 13th September to consider setting up a new Regional Group of the Society. Although the number of attendees at this inaugural meeting was quite small, there was very considerable enthusiasm for the formation of a group and it was decided that this should go ahead. The group will be called the **South Wales and the Borders Group** and an outline programme of field and garden meetings for 2009 was agreed. All members of the BPS who responded to the initial suggestion will be sent the 2009 programme when it is finalised, as will those in the region who have provided the BPS with an e-mail address. Any other interested members should contact Brian Dockerill at 19 Westfield Road, Glyncoch Pontypridd, Mid-Glam. CF37 3AG, tel. 01443 402999 or brian.dockerill@tiscali.co.uk for further information. They look forward to meeting you at future events of what we feel sure will become a thriving group.

DESTINATION OF PTERIDOPHYTE RECORDS – Members are reminded that records of ferns, horsetails, clubmosses and quillworts in the wild should be sent to the appropriate Botanical Society of the British Isles (BSBI) Vice-county recorders, whose addresses are available from the BSBI website or BSBI yearbook, which is available to BSBI members. For those without access to the Internet or yearbook, records may be sent to the BPS Recorder, Fred Rumsey, who will forward them to the BSBI. These records are stored centrally at the Biological Records Centre, and can be accessed by the BPS.

NEW PHOTOGRAPHIC RECORDING PROJECT – If you have been following Chris Page's series of articles on Recording Ferns in *Pteridologist* (see Vol. 4, Part 6, pp 188-189) you will have read that keeping photographic records of fern sites is a very powerful method of monitoring the effect of environmental conditions on fern populations. With this in mind we are launching this new project with the hope that members who regularly photograph ferns will contribute by supplying their photographs and also to encourage members who visit sites on a regular basis to start keeping their own photographic records. This new project will ultimately be launched on our website. Please contact the General Secretary with any contributions or for more information.

NEW BPS IDENTIFICATION KEY – Adrian Dyer is developing a new fern identification key for beginners that will ultimately be downloadable from our website. He is looking for volunteers among BPS members or their families who would be willing to try out the key during the coming season and then report back with any difficulties and/or successes. Please contact Adrian by e-mail for a test copy: adrian@dyer499.freeserve.co.uk.

ANNUAL GENERAL MEETING 2008

MINUTES of the 105th Annual General Meeting of the British Pteridological Society held on Saturday 5th April 2008 at the Natural History Museum, London at 1400 hrs.

[Preamble. These minutes are shorter than those of previous years as a result of most of the Officers' and Committee Appointees' Reports for 2007 being published in the *Bulletin* for 2007 in advance of this AGM. The exception is the report of the General Secretary, which was updated by Yvonne Golding, read out at the meeting, and thus also reproduced here. These minutes have been reviewed by Robert Sykes, Yvonne Golding and Alison Paul, and their approval will be sought at the next Annual General Meeting on 4 April 2009. Notes, not being part of the minutes, are enclosed in square brackets as is this one.]

IN THE CHAIR: The President, Mr Robert Sykes.

PRESENT: Graham Ackers, Pat Acock, Jo Basil, Clive Brotherton, A.R. (Matt) Busby, Rob Cooke, Richard Dadd, Gerry Downey, Adrian Dyer, John Edgington, Alison Evans, Lizzie Evans, Mary Gibby, Rowan Godfrey, Roger Golding, Yvonne Golding, Alistair Grandison, Nigel Hall, Nick Hards, Michael Hayward, Graham Hoare, Jack Hubert, Jennifer Ide, Howard Matthews, Frank McGavigan, Christine Mullins, Karen Munyard, Steve Munyard, Alan Ogden, Alison Paul, Anthony Pigott, Tim Pyner, Julian Reed, Martin Rickard, Fred Rumsey, Bryan Smith, Gill Smith, Barrie Stevenson, Sandy Strang, Matt Stribley, Alistair Urquhart, Philip Urquhart, Danny Vanstraelen, Alastair Wardlaw, Lesley Williams.

Item 1 – APOLOGIES FOR ABSENCE: Ian Bennallick, Jonathan Crowe, Peter Freshwater, Elise Knox-Thomas, Frank Katzer, Bridget Laue, Sylvia Martinelli, James Merryweather, Mike Porter, Paul Ripley, Mike Taylor, Robin Walls.

Item 2 – APPROVAL OF THE MINUTES: Minutes of the 104th Annual General Meeting of the British Pteridological Society held on Saturday 24th March 2007 and published in the *Bulletin* (Vol. 6, No. 6) were approved and signed by the Chairman.

Item 3 – MATTERS ARISING: There were none.

Item 4a – REPORT OF THE GENERAL SECRETARY (Yvonne Golding):

2007 was another busy year for the BPS committee. We met in January in London at the Natural History Museum; we had our AGM in Edinburgh where we welcomed our new President Robert Sykes, two new Vice Presidents – Rob Cooke and Mike Porter, and four new committee members: John Edgington, Roger Golding, Howard Matthews and Matt Stribley. This new committee met for the first time in May, this time in Manchester, and went back to London for our October meeting.

This year we have re-written our constitution, a task that took much longer than we originally anticipated! There were many clauses that had to be changed to reflect our current situation and to make our Society more compatible with Charity Law. We have changed the wording of the Objects which we now think better describe the wide-ranging activities of our Society. We had a heated debate about whether we should change the name of our Society but for the moment we are leaving it as British Pteridological Society. We have agreement though that we can use a qualifying strap line along the lines of 'the society for fern enthusiasts' wherever possible. We finalised the constitutional changes at our committee meeting in January 2008. We have the full agreement of the committee for the changes. Today we will be asking you to vote for it.

After the successful indoor meeting at Wisley in November, a small working group met on the Sunday to discuss the future direction of the BPS and to try and come up with an

achievable three year plan. These Planning Meetings, a relatively new initiative, are held every three years during the first year of a new Presidency. Such meetings enable key members of the committee to discuss strategic issues unencumbered by routine committee business. One of the main topics identified for discussion was the desire to raise the profile of the BPS, both to attract new members and also to engage more with the general public, which is our statutory duty as a charity. We have come up with some ideas, which we are actively pursuing. These include a greater presence at flower shows, and fern meetings for the general public. Other issues discussed were education about ferns, both for our members and the public, what else we can provide for gardeners and how we can expand our regional groups to cover the whole of the UK.

We were sorry to learn of the deaths of four of our members. These were Dr Donald Carmichael of Devon who joined the Society in 1997, Dr Robert Finch of Cambridge who joined in 1968; in January of this year, Mr Alf Hoare aged 89 of Hertfordshire who joined the Society in 1969 and lastly in February of this year, Mr Wallace Fyfe who became interested in ferns when he discovered a Victorian fernery in his garden at Ascog Hall on the Isle of Bute. He raised funds to restore it to its former glory and it will be his lasting legacy. Obituaries for Alf Hoare and Wallace Fyfe will be published in the 2008 *Bulletin*.

Another downside of the year's end is marked by the retirement of some of our hard-working officers. We say goodbye to James Merryweather who has done a splendid job in editing ten issues of *Pteridologist*, the last six of which were very professionally presented and in full, glossy colour. We look forward to new input in *Pteridologist* from Martin Rickard, assisted by Alec Greening. I understand it is to be a bumper issue this year and published in the spring, so they have certainly got off to a good start.

Pat Acock retires after ten very productive years as Meetings Secretary, organising full and ambitious programmes of trips (which he almost always attended) up and down the country and abroad. But luckily Pat continues to help us out in so many other ways and long may it continue. We wish his successor Rob Cooke the best of luck in this role.

Frank McGavigan retires as an elected committee member and we shall miss his measured and logical approach on issues at meetings but he continues as Regional Organiser for Scotland where he has embarked on a recording project monitoring some of our rarest ferns. He also has input into the newly formed website sub-committee.

Matt Busby also retires as a committee member but he is still very much involved with the Society as Archivist and adviser on horticultural matters, and is about to embark on another important role.

And Anne Wright is trying to retire as Spore Exchange Organiser; Barry and Anne have provided this very popular and important service to members both in this country and abroad for ten years. We urgently need to find replacements for them so we can maintain this service for members. If anyone feels willing and able to fill this post Anne has agreed to give full training and work with you over the course of this year so the new person can confidently take over. It also comes with a fridge if that is any incentive!

Our Society is run entirely by a fleet of volunteers who work on behalf of our membership and I would like to thank all of them for their hard work throughout the year.

Item 4b – REPORT OF THE TREASURER (Gill Smith): The Treasurer referred the meeting to the accounts published in the *Bulletin*, and invited questions and comments. There were none, and the members agreed to adopt the accounts.

Item 5 – QUESTIONS ON OFFICERS' REPORTS

Membership Secretary's Report. Adrian Dyer asked whether the committee had any thoughts about addressing the gentle decline in membership. Mary Gibby reported that this was an issue with other specialist societies, caused perhaps by the lack of exposure in schools, and a decline in a passion for looking at plants in detail (although conservation does currently have a high profile). Both agreed that we should perhaps be seen to be doing something 'useful', such as recording. Robert Sykes reported that the Butterfly Conservation Society had a strong membership, partly because butterflies were good indicators of global warming on a year by year basis (plants only demonstrating global warming effects over a much longer time scale).

Danny Vanstraelen suggested setting up a web forum as a way of attracting new members, including younger people. It was pointed out that there were two fern forums in existence already – the USA-based Fernet, and the UK-based UKFerns. However, Rob Cooke maintained that to attract new members, a BPS forum was required. [Note, this will be discussed by the committee.]

Website Editor's Report. Jennifer Ide enquired about progress on putting the Society's journals on-line, wondering whether their absence could be one cause of declining membership. Anthony Pigott responded with the following points:-

- The committee had decided that there would be a two year delay before a journal could be put on the web.
- An investigation was underway to determine how many journals were currently available in electronic format (probably runs of about five years).
- Some editing work will be required before they could be put on-line.
- Then would follow the more significant work of including the majority of the journals available only in paper form. One possibility would be to pay for this to be done.

In answer to a question about whether the Society should have its own website, Anthony Pigott pointed out that the Society has its own domain, but is hosted on the Natural History Museum's server.

Item 6 – QUESTIONS ON COMMITTEE APPOINTEES' REPORTS

Archivist's Report. Expanding on this report, Yvonne Golding reported that Manchester Museum had agreed to house our archives free of charge, and were in the process of drawing up a loan agreement. Jennifer Ide asked whether her own investigations into archive preservation should be continued, but it was suggested these be put on hold until after the removal of the archives to Manchester.

Fern Varieties Subcommittee Report. As an addition to this report, Robert Sykes reported that a Fern Registration Subcommittee had been formed with the intention of identifying one or more fern variety Registrars from within the Society. Although there were international Registrars for many other groups of horticultural plants, to date ferns had not been catered for. The first group to be addressed will be the genus *Polypodium*, because Martin Rickard had already performed much of the appropriate groundwork.

Item 7 – ELECTION OF OFFICERS AND COMMITTEE, AND APPOINTMENT OF INDEPENDENT EXAMINERS

Vice-Presidents. Nominations had been received for Mr A.R. (Matt) Busby and Dr Adrian Dyer, and they were elected unanimously.

Officers. All of the Officers except the two noted below were available for re-election. This was proposed by Nick Hards, seconded by Howard Matthews, and they were unanimously

re-elected en bloc. They are: General Secretary Dr Yvonne Golding, Treasurer Mrs Gillian Smith, Membership Secretary Mr Mike Taylor, Conservation Officers Dr Heather McHaffie and Dr Fred Rumsey, *Fern Gazette* Editor Prof. Mary Gibby, *Bulletin* Editor Miss Alison Paul, Website Editor Mr Anthony Pigott.

Meetings Secretary. Following ten years of service, Pat Acock was retiring, and nominations had been received for Rob Cooke as his replacement, and he was elected unanimously.

Pteridologist Editor. Following six years of service, James Merryweather was retiring, and nominations had been received for Martin Rickard as his replacement, and he was elected unanimously. He will be assisted by Alec Greening.

Elected Committee Members. The two longest serving members, Mr A.R. (Matt) Busby (elected 3/2005) and Mr Frank McGavigan (elected 3/2004), were retiring and were not available for re-election as Elected Committee members.

The remaining six members (Dr Michael Hayward, Dr Sylvia Martinelli, Prof. John Edgington, Mr Roger Golding, Mr Howard Matthews and Mr Matt Stribley) were available for re-election. This was proposed by Rob Cooke, seconded by Adrian Dyer, and they were unanimously elected en bloc.

In addition, nominations had been received for Mr Alec Greening, Dr Bridget Laue, Mr Paul Ripley and Mr Bryan Smith, and they were all unanimously elected.

Independent Examiners. Dr Nick Hards and Mr Alex Storie had agreed to act as Independent Examiners.

Item 8 – CHANGES TO THE BPS CONSTITUTION

Robert Sykes outlined the background to the re-drafting of the constitution, which had been circulated to all members. Some of the amendments reflect changes in the way the Society is run, and some merely tidy up the existing document. It was not possible to take amendments at this meeting, but it was necessary to vote on its adoption.

In clause 3.1, the replacement of the names of the journals with "regular publications" was queried, but it was pointed out that this was to allow more flexibility, and there was no hidden agenda to abandon any of the three current journals!

The votes for adopting the revised constitution were 45 for, 0 against and 1 abstention. [Note, the new constitution is published elsewhere in this journal.]

Item 9 – ANY OTHER BUSINESS

J.W. Dyce Award. This was a new award to commemorate the great contribution made to the Society by the late Jimmy Dyce. It would be presented annually to the writer of the best article (or book) to appear in the previous year, and consisted of a cash prize of £100. Five articles had been considered:–

'The species and subspecies in the *Dryopteris affinis* group' by C.R. Fraser-Jenkins in *The Fern Gazette*, vol. 18, part 1, 2007.

'Dynamics of long-distance dispersal: the spread of *Asplenium adiantum-nigrum* and *Asplenium trichomanes* (Aspleniaceae: Pteridophyta) on London walls' by J.A. Edgington in *The Fern Gazette*, vol. 18, part 1, 2007.

'Male Ferns 2007' by James Merryweather in the *Pteridologist*, vol. 4, part 6, 2007.

'The Fine Ferns of *Flora Graeca*' by Graham Ackers in the *Pteridologist*, vol. 4, part 6, 2007.

'Fern Collections in Manchester Museum' by Barbara Porter in the *Pteridologist*, vol. 4, part 6, 2007.

In the end, it had been decided to make the award jointly to Christopher Fraser-Jenkins and James Merryweather, having written technical and approachable articles respectively on the difficulties in identifying male ferns. Neither recipient was present, but Robert Sykes read out a rather entertaining e-mail from Christopher Fraser-Jenkins acknowledging the award.

Outstanding Service Awards. This was a new award initiated during the chairmanship of Adrian Dyer, and this time was awarded to two people. James Merryweather had edited the *Pteridologist* for a total of ten years (including a break), during which he had changed the format of the magazine to be artistically presented and very colourful. As well as his many other duties, Pat Acock had run many highly successful meetings, most of which he attended, both at home and abroad, and he was present to receive the award of an engraved cut-glass goblet.

Focus on Spleenworts Meeting 1 November 2008. Robert Sykes drew attention to this meeting, to be held at the Natural History Museum, and encouraged members to attend.

New Spore Exchange Organisers Needed. Following the request of the current organisers Barry and Anne Wright to retire, Robert Sykes emphasised the importance of finding replacements for what was one of the Society's most important jobs, and requested any volunteers to contact him.

Website Areas to be Delegated. There was a need for discrete areas of the website to be delegated to individual editors, and Robert Sykes urged members both to offer editorial assistance, and to accept editorial roles. [Note, this will be progressed by the committee.]

Restoration of the Fernery at Benmore Gardens. Mary Gibby had written to Robert Sykes concerning the restoration of the Benmore fernery. The letter had then been circulated to committee members, and some copies were made available at the meeting for attendees to read. A final £65,000 was still required, and Mary had asked whether the BPS could contribute, perhaps considering helping towards the cost of some interpretation on ferns that would complement the plantings. Adrian Dyer made a similar suggestion that we might consider sponsoring something. The previous feedback received from the committee had been variable, but the meeting was generally sympathetic to supporting this project providing BPS funds were available.

The Second James Bolton Fern Drawings. The first set of Bolton's fern drawings for the first British fern book [*Filices Britannicae*] were housed at the Natural History Museum. His second set of unpublished watercolour drawings were now up for sale by an American dealer at £65,000, and Graham Ackers had offered a contribution to the NHM to help acquire these. He asked the meeting whether BPS and/or individuals would be interested in contributing also. There was general agreement that BPS could make an offer, but that the amount of such an offer should be carefully considered.

A Week-long Field Meeting? Martin Rickard wished to test the idea of running week-long UK field meetings, and asked attendees whether they might be interested in attending such a meeting in the north of Scotland in say 2009 or 2010. A show of hands indicated considerable interest for this idea.

Robert Sykes closed the meeting at 15.10.

Graham Ackers
Committee Secretary

BPS ACCOUNTS FOR 2008

	2007	2008
ORDINARY ACCOUNT		
INCOME		
Subscriptions	£15,485.05	£13,937.58
Interest	£1,415.82	£1,773.82
Booksales	£3,386.44	£765.00
Merchandise (*see note 9*)	£827.85	£864.03
Inland Revenue Gift Aid (*see note 8*)	£1,131.03	£0.00
Publishers Licensing Society	n/a	£440.01
Donations	£243.00	£96.00
Other	£543.00	£277.93
TOTAL INCOME	**£23,032.19**	**£18,154.37**
EXPENDITURE		
Pteridologist	£3,946.30	£3,360.30
Fern Gazette	£2,905.00	4,362.03
Bulletin	£0.00	£3,778.00
Printing & Stationery	£12.28	£169.00
Administration & Postage	£533.06	£405.40
Subscriptions to Societies	£34.00	£36.00
Plant & Spore Exchanges	£15.00	£12.00
Meetings	£25.00	£44.79
Merchandise	£723.26	£1,296.54
Trustees' Expenses	£933.64	£1,025.54
Archive Storage	£356.13	£452.56
Booksales	£1,749.31	£7,355.97
Special Awards	£0.00	£339.93
Autumn Mailing	£530.00	£540.17
Credit Card Costs	£116.81	£73.86
Computer Leasing	£267.20	£727.24
Other	£828.00	£166.80
TOTAL EXPENDITURE	**£12,974.99**	**£24,146.13**
Balance (income minus expenditure)	**£10,057.20**	**–£5,991.76**
Brought Forward from previous year	**£29,240.06**	**£39,297.26**
Total in Ordinary Account	**£39,297.26**	**£33,305.50**
CENTENARY FUND (Restricted Account)		
Interest	£342.09	£334.34
Interest brought forward from previous year	£1,481.25	£1,823.34
Grant	£0.00	£500.00
Total Interest	**£1,823.34**	**£1,657.68**
Capital brought forward from previous year	£5,583.73	£5,583.73
Total in Centenary Fund	**£7,407.07**	**£7,241.41**

GREENFIELD FUND (Restricted Account)

Interest	£120.23	£117.51
Interest brought forward from previous year	£1,432.04	£1,552.27
Grant	£0.00	£0.00
Total Interest	**£1,552.27**	**£1,669.78**
Capital brought forward from previous year	£1,051.00	£1,051.00
Total in Greenfield Fund	**£2,603.27**	**£2,720.78**

PUBLICATIONS ACCOUNT

Brought forward from previous year	£6,678.84	£8,750.83
Income	£1,914.73	£941.09
Interest	£323.39	£395.00
Expenditure	£166.13	£0.00
Total in Publications Account	**£8,750.83**	**£10,086.92**

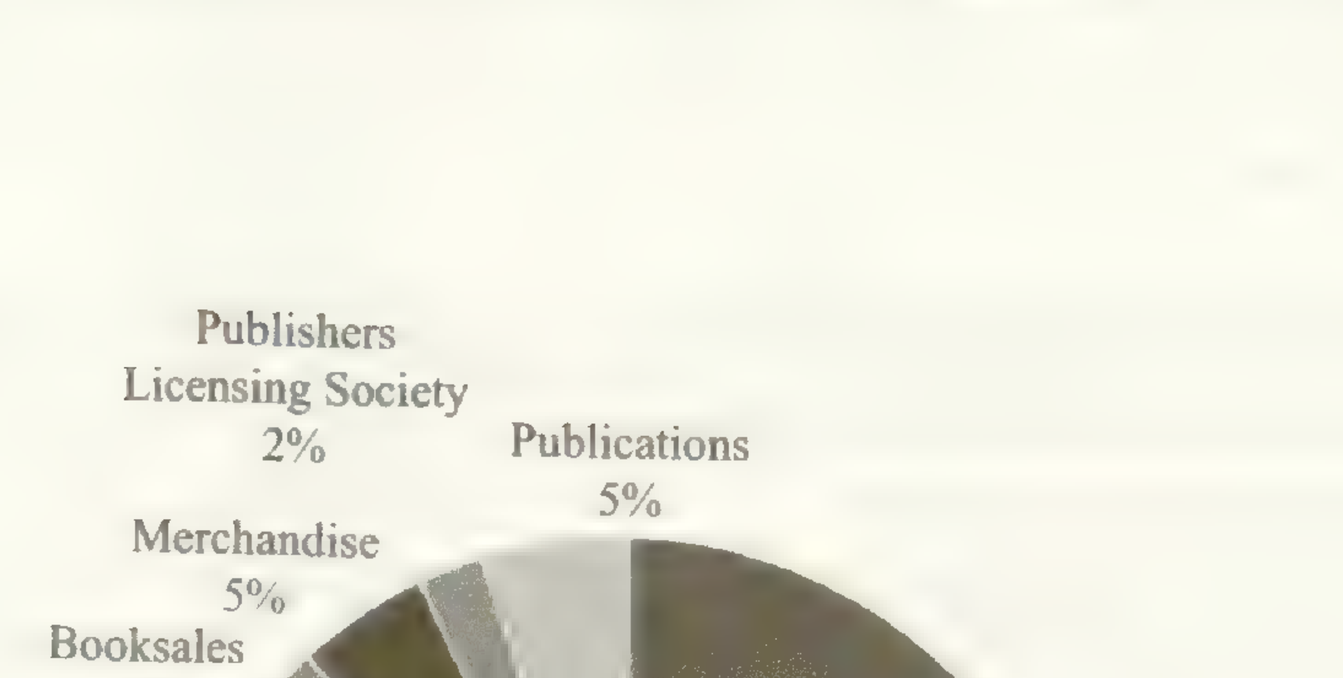
TOTAL FUNDS FOR YEAR ENDING 31 DECEMBER 2008

Ordinary Account	£39,297.26	£33,305.50
Centenary Fund	£7,407.07	£7,241.41
Greenfield Fund	£2,603.27	£2,720.78
Publications Account	£8,750.83	£10,086.92
Total Funds	**£58,058.43**	**£53,354.61**

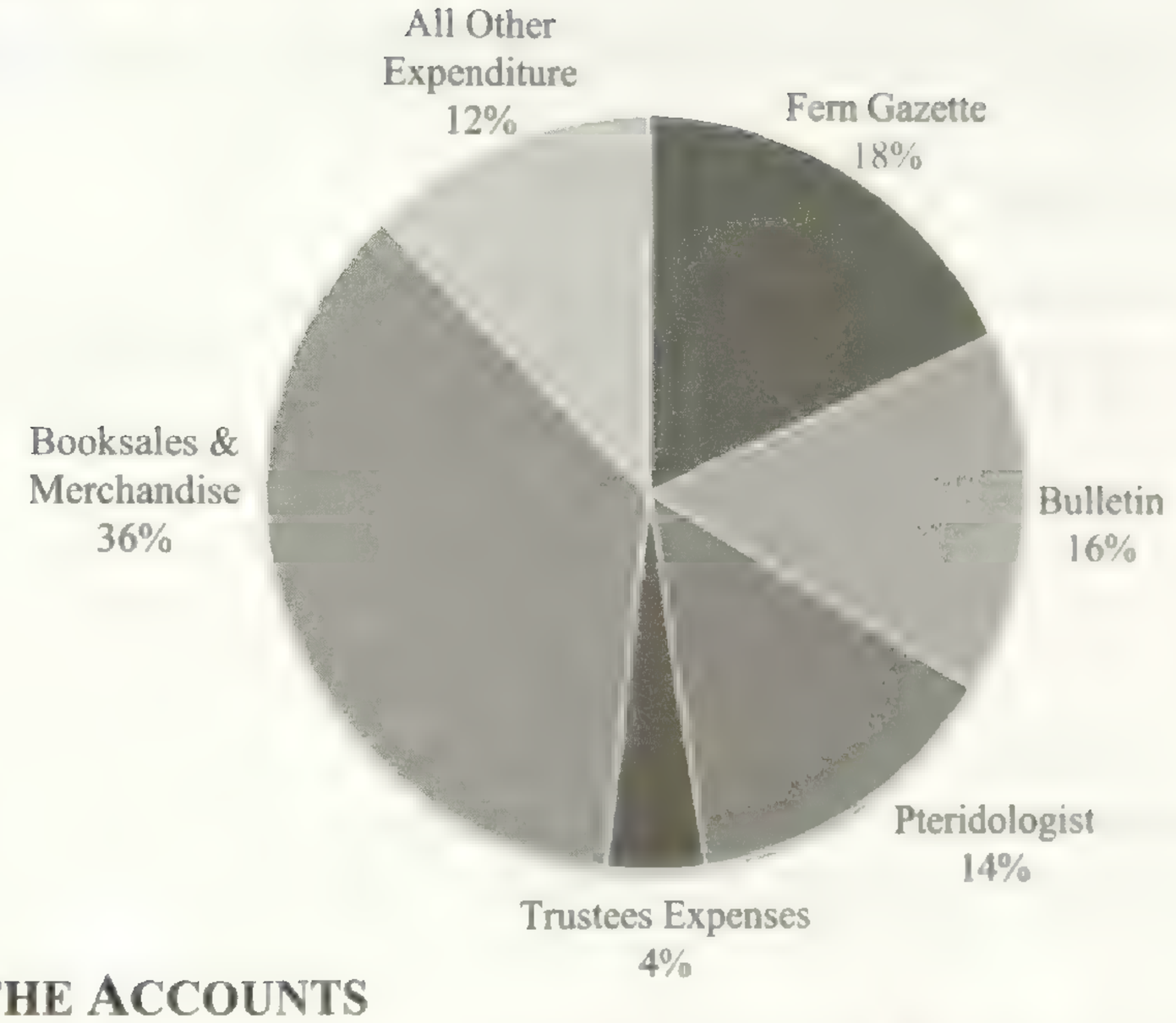
REPRESENTED BY

Charitable Organisations Investment Fund	£40,926.92	£43,166.95
Bank of Scotland & Others	£17,131.51	£10,187.66
Total Funds	**£58,058.43**	**£53,354.61**

INCOME 2008



EXPENDITURE 2008



NOTES TO THE ACCOUNTS

1. The accounts reflect the subscriptions actually received in the year.
2. The Publishers Licensing Society approached BPS with a view to obtaining royalties for copying BPS publications. They were able to go back over previous years and collect amounts due to BPS so in this first year income is higher than would normally be the case.
3. The Society possesses the following stock:
   Back issues of the *Bulletin*, *Fern Gazette* and *Pteridologist* valued at approximately £1,500.
   Merchandising valued at approximately £2,500 & capital of £834.87
   Booksales - new and second-hand books valued at approximately £7,500 & capital of £434.32.
   FSC Key to Common Ferns – 344 valued at £616
   BPS Special Publications entitled (no. copies) valued at:
   Fern Names and their Meanings (81) £365
   Cultivation and Propagation (240) £1,200
   History of British Pteridology (708) £2,124
   BPS Abstracts & Papers (373) £1,119
   CD Rom – BPS Minute Book (6) £60
   Polystichum Cultivars (50) £625
   New Atlas of Ferns (68) £612
   Fern Books Before 1900 (369) £5.535
   Occasional Paper of the BPS (11) £28
4. Full details of Merchandise and Booksales Accounts can be obtained from the Managers.
5. The Society decided to split our two Restricted Funds into 'Capital' and 'Interest'. The 'Interest' section of the Funds is available for payment as grants.
6. A grant of £500 was made from the Centenary Fund in 2008 to Sarah Whittingham to help research two new books on Pteridomania (a report will be published in the 2009 *Bulletin*).
7. Computers for specific BPS officers' use are being leased from Dell Computers. This gives the Society the ability to keep up with computer technology without having to invest capital funds.
8. Gift Aid returns are not listed on these accounts as the claim form was lost by the Inland Revenue. This was not realised until later in the year; the return has been re-submitted but IR have a backlog. At the time of completing these accounts, it had not been received. This will now appear in the 2009 accounts.
9. In the past year, several credit/debit card input slips have NOT been entered into the BPS account by BoS. The total amount missing is £178.70. This has been notified to BoS who are investigating. £120.70 of this was accounted for in the Merchandise 2008 accounts. This has been removed from 2008 combined accounts to allow paperwork to balance to bank accounts.

Gillian Smith, Treasurer

ACCOUNTS FOR THE YEAR ENDING 31 DECEMBER 2008

I have examined the accounting records maintained by the Treasurer of the British Pteridological Society. I can certify that the accounts presented to me are in accordance with the books and records.

Dr Nick Hards, Independent Examiner, 24 February 2009

REPORTS OF OFFICERS & COMMITTEE APPOINTEES FOR 2008

GENERAL SECRETARY – Yvonne Golding

In 2008 the BPS committee met in January at The Natural History Museum in London; we had our AGM in London where we welcomed Adrian Dyer and Matt Busby as new Vice-Presidents together with new committee members Bridget Laue and Alec Greening and also welcomed back Paul Ripley and Bryan Smith. Rob Cooke took over from Pat Acock as Meetings Secretary and Martin Rickard became Publications Secretary. This new committee met for the first time in May in Manchester and we were back to London for our October meeting.

Our committee is very hard working and we take pleasure in acknowledging their efforts. Anne Wright retired as Spore Exchange Organiser in 2008. Barry and Anne between them have provided this popular and important service to members both in this country and abroad since 1997 and we will be acknowledging that service by awarding them one of our Outstanding Contribution Awards. Unfortunately we have not been able to find a replacement for them but Matt Busby has come to the rescue and is providing this valuable service for us in 2009. We do still urgently need to fill this post; the spore exchange is a popular service and an important incentive to attract new members. It could be run by one person or perhaps by a couple. If anyone feels willing and able to fill this post, full support will be provided so the new person can confidently take over. It also comes with a fridge if that's any incentive!

Another retiree is Alastair Wardlaw who, besides being President of our Society from 2001 to 2004 and spearheading our bid to become a registered charity, has convened the Tree Fern Special Interest Group and edited the newsletter (latterly in *Pteridologist*) since 1997. He has really put tree ferns on our agenda and encouraged many of us to grow them in our own gardens. We therefore also recognise Alastair's input by awarding him one of our Outstanding Contribution Awards.

In 2008 we awarded the first J.W. Dyce award jointly to Christopher Fraser-Jenkins and James Merryweather for their articles in *Fern Gazette* and *Pteridologist* enlightening us on the subject of the *Dryopteris affinis* group. The award (of £100) is open to anyone who writes an interesting and informative article for any of our publications.

From time to time we also like to recognise exceptional service by conferring honorary membership. This year we are awarding this gratifying (and useful!) award to Prof. Barry Thomas and John Woodhams. Barry has been a member of the Society for a staggering 45 years and a committee member for 35 of those years, including holding the offices of President and Treasurer (for 14 years) and various periods editing *The Fern Gazette* and *Pteridologist*. John Woodhams, a member for 38 years, has also served as a committee member and Vice-President and hosted numerous Society visits to RBG Kew. We hope they will continue to enjoy their membership during retirement.

Also in 2008 we made an award from the Centenary Fund to Dr Sarah Whittingham, who is an architectural historian, to help research two new and exciting books on Pteridology. One by Shire Publications on The Victorian Fern Craze is to be published in 2009 and another published by Francis Lincoln Publishers on Pteridomania. We look forward to these books and having our Society acknowledged in them.

Since our AGM of last year we have learned of the death of six of our members. Rita Coughlin joined the BPS in 1969 with her husband Ray who was an avid fern grower and raised many new cultivars; Rita looked after his fern collection for as long as she was able

after Ray's death in 1996. Gerry Downey was a keen and excellent grower of species ferns and was a BPS member for 34 years; Pat Hill-Cottingham, a member since 1985, published her work on Somerset ferns; Edward Needham was a very significant fern grower, though only a member for a few years; Barbara Porter was a keen fern grower and member since 1993 and John Hicks who joined in 1999 was a regular at South-East Group meetings. Please read their obituaries in the *Bulletin*. In addition, we have learned of the death of three overseas fern enthusiasts: Milton Edwards of Belgrave Australia who joined the BPS in 2006, Bob Halley of California, USA, a member since 1989 and Claude Jérôme of France who, though not a BPS member, was an active member of the Group of European Pteridologists. Our sympathy goes out to their families.

Looking ahead, our Committee is actively seeking ways to improve our Society both for its members and to raise our profile to the general public to attract new members and to raise awareness of ferns, their cultivation, ecology and conservation. To this end we would like to appoint two new officers: Publicity and Marketing Officer and an Education Co-ordinator. If you have any skills in this area and would like to help, even in a small way, then please contact Graham Ackers.

In the future we would like to be able to allocate all members, if they should wish, to a Regional Group so they can be put in touch with local fern-lovers and take part in meetings, excursions, exchange horticultural knowledge (and plants!) and monitor and record native ferns in their area. We already have six flourishing Regional Groups in Scotland, Yorkshire, North-West and South-East England, East Anglia and Cornwall. To this list we are pleased to announce the formation of a new group, South Wales and the Borders, led by Brian Dockerill. We wish him every success and support in this new venture. We are also hoping that other groups will follow, notably in the Midlands and Wessex.

One of the strengths of our Society is the horticultural knowledge amongst its members and the huge range of ferns and their cultivars that are grown in their gardens. A new Subcommittee has been set up with a view to ultimately establish our Society as the International Cultivar Registration Authority for particular fern groups. They are starting with *Polypodium*. We wish Colin Ellis and his committee the best of luck in this new venture.

In these times of recession, when money is short, it is difficult for a small specialised charity such as ours to maintain its current membership, let alone encourage new members. We are not alone in this difficulty. If we want to promote our Society we really must engage more with the general public and as a charity we should be doing this anyway. We can all contribute as individuals by encouraging friends and family to join and take an interest in ferns. We already meet enthusiastic gardeners through our annual presence at Southport Flower Show facilitated by Mike Hayward. From time to time we are lucky enough to have a presence at other venues; in June 2008 Ray Smith and Matt Busby put on a fern display at the University of Birmingham Botanic Garden Open Day. This year (2009) we plan to represent the BPS for the first time at the RHS Tatton Park Flower Show in The National Plant Societies Marquee. This gives us the opportunity to engage with thousands of visitors. If this is a success maybe our presence will become a regular feature and who knows others may want to represent our Society at other large venues. We hope that as many members as possible will visit us in Cheshire. In addition, we are planning a Fern Day at Manchester Museum in September 2009. The museum already runs a successful series of events called Big Saturdays. We are slotting into this series by presenting a range of talks and displays of anything fern-related, including living plants, all aimed at the general public with little or no knowledge of ferns. If this is a success then maybe we can develop a fern road show that members can take to other parts of the country.

I hope you will agree that your committee is working very hard to help maintain the success of our Society in a changing world and to fulfil its charitable purposes.

MEMBERSHIP SECRETARY – Mike Taylor

2008 was a very disappointing year with a further drop of 73 in membership numbers, making a total drop of 139 since 2005. We now have a total of 654 members made up of 443 Full, 87 Optional, 29 Complimentary, 6 Honorary, 7 Student and 82 Subscribers. There are a further 49 family members. The amount recovered in Gift Aid for 2008 should be approximately £1,043; the Society will have benefited by the magnificent sum of over £6,000 since we first started claiming Gift Aid.

Only 36 new members were recruited in 2008 compared with 62 in 2007, however, on the bright side 8 members re-joined for 2008 and we have already had 17 new members for 2009. There has been no drop in the number of Subscribers and the number of members who pay via the AFS has increased by two to a total of 67.

I personally do not know what else we can do to encourage people to join the Society. We produce three great publications, we have a spore exchange system in place and we organise pteridological meetings that range from small local affairs to international meetings all over the world. Any of these are worth the £20 membership fee.

MEETINGS SECRETARY – Rob Cooke

2008 was another year in which we were able to arrange a varied and well attended meetings programme; I hope those of you who did not attend read the reports and have your appetites whetted for this forthcoming year. Although I have been Meetings Secretary for a year now, I must give a huge vote of thanks to Pat Acock, who before passing on the mantle organised last year's programme. Now that the responsibility for the 2009 programme has fallen to me, I well realise the amount of work Pat put in; indeed he continues to guide and support me, and I am very pleased that he remains on the sub-committee. I must too thank the members of the sub-committee, and welcome Roger Golding, who joins us this year. We have put together a good programme of meetings and I hope many of you attend. As always we are very keen to receive offers to run meetings, or suggestions of where to hold meetings, so please do let me or other members of the committee have your ideas.

CONSERVATION OFFICER – Fred Rumsey

As in 2007 the Society's local groups working with Heather and myself and other individual members have been actively involved in gathering valuable monitoring data for the conservation agencies on several threatened fern species and related re-introduction programmes. We hope to integrate more fully such actions in future meetings programmes. Additions continue to be made to the British list – both native (*Dryopteris pseudodisjuncta*) and alien. As noted last year invasives have a potentially profound effect on our flora and most arise as garden escapes; their study and documentation is thus of some importance. A revised British Checklist of all taxa giving their conservation and legal status is currently being prepared. Advice continues to be given on conservation issues relating to pteridophytes when requested.

RECORDING OFFICER – Fred Rumsey

I am very grateful to the many members who have helped contribute records this year and it is pleasing to be able, once again, to document the discovery of new species and hybrids to the British Flora made as a result of members' actions. I would like to apologise for the lack of progress on delivery of the new recording cards - it is hoped that versions of these can be made generally available on request soon. Anthony Pigott and I continue to liaise with the Botanical Society of the British Isles as to how we might mutually benefit with regards to recording matters. Please contact me if you are unsure how to pass records to the appropriate authorities, or indeed if you want guidance or support for activities that involve record gathering. Belatedly, in 2009 I hope to outline in the Society's journals and website

how we as a Society can contribute to these important activities and the potential benefits to members of doing so. It is still my hope that recording will become more widely embraced within the Society and better integrated into our field meetings. As I have said before, your expertise and knowledge is important and shouldn't be overlooked. All records are important!

PUBLICATIONS SECRETARY – Martin Rickard

All three journals are running to schedule at the time of writing. Special Publications continue to sell steadily, with one new addition this year. Michael Hayward has reproduced *The Occasional Paper of The British Pteridological Society*, published in 1875, as Special Publication no. 10. It is a slim volume but of great interest as it was produced 16 years before the recognised birth date of our current Society. Initially this Paper was issued with a free nature print by Col. Jones; through diligent research Michael has re-found this print and a full size reproduction is included plus another full size reproduction of Wollaston's chart for distinguishing between *Dryopteris oreades*, *D. filix-mas* and *D. affinis*. His table is still good today, 134 years later – although the names have changed of course! Copies are available from Pat Acock for £2.50 + postage (inland £0.75, Europe £1.00, world printed papers £1.25).

***FERN GAZETTE* EDITOR – Mary Gibby**

The *Fern Gazette* Volume 18 parts 3 and 4 were published in August and December 2008 respectively. Part 4 is a much bigger size than normal to accommodate a substantial paper of c. 100 pages. It was not practical to split this into two parts, and, with the agreement of the committee, the decision was made to publish an extended part. In anticipation of this Part 3 had slightly fewer pages than normal.

Currently there is plenty of copy being received; six papers are currently out for review or have been sent back to authors for revision. The next part is planned for spring 2009. I welcome feedback from members on the balance of content in the articles in the *Fern Gazette*. I know that some papers in particular have generated considerable discussion and debate, and this can only be good for the subject!

***PTERIDOLOGIST* EDITOR – Martin Rickard**

As planned, the publication of the *Pteridologist* in 2008 was brought forward to May and was almost double the size of the previous year's issue. This was made possible by an excellent crop of articles being submitted by members and by the other half of the editorial team, Alec Greening, finding a very competitive quote from a local printer. We believe costs for 2009 should be similar so we hope to be able to produce another bumper issue. Deadline for copy will continue to be January 31st each year. Please send in your contributions in good time, preferably not on the 31st January! Publication is again targeted for May or June.

***BULLETIN* EDITOR – Alison Paul**

The 2008 *Bulletin* is another large one – 92 pages, with 52 contributors – reflecting the continuing high number of BPS meetings, both National and those organised by our Regional Groups. Sadly it also contains quite a few obituaries. I would like to thank those contributors who sent in their reports or photographs in good time and urge others to do the same in future.

WEBSITE EDITOR – Anthony Pigott

The website continues to develop, both with the usual updates of BPS information, such as meetings programmes, spore lists and publications, and new features such as news of the cultivated fern herbarium, the Editor's Blog and on-line pteridophyte distribution. The home page has continued to evolve, especially to enable visitors to access new information quickly.

We continue to look at how more people can be involved in the development and running of the website and at how the website itself can be best structured to facilitate that. As always, offers of contributions and other help are extremely welcome.

PROJECT OFFICER – Anthony Pigott

We now have four main projects underway.

Recording & Mapping. This project will implement a number of items all aimed at increasing the participation of the BPS in the recording and analysis of pteridophyte distribution in Britain and Ireland. This will include encouraging members to make records and working with the BSBI to facilitate the input of new data and access to existing records. This has been delayed by the availability of key individuals but we hope to restart very soon.

Photographic Recording. This project is separate to but complementary to the Recording & Mapping Project. People will be asked to take photographs of fern sites at different points in time with a view to learning about variations in conditions and abundance. The project is about to be launched.

On-Line Journals. The BPS has decided to make back numbers of its journals available on-line. There is a tremendous wealth of pteridophyte knowledge in those pages which is currently difficult to access and search. This project has looked at the technical and administrative issues involved. The coming year should see the availability of more recent issues that are already in some digital format. We are actively investigating the possibility of bulk scanning of the older paper-only issues.

Website Development. We see the website as being of increasing importance to the BPS and the way it communicates with its members and the public. This project has looked at ways to get more people involved and to make the website easier to expand and develop. A recent initiative has seen the identification of named information providers for many sections of the website.

SPORE EXCHANGE ORGANISER – Anne Wright

The Spore Exchange continues to be a popular and important part of the Society's activities. In 2008, 119 members requested and received spores from the exchange. Of these, 82 requests were from UK members and 37 from overseas. This reaffirms the international nature of our exchange. The overseas requests were from Australia 3, Belgium 4, Canada 1, Denmark 3, Estonia 1, Finland 1, France 1, Germany 5, Hungary 1, Italy 1, Latvia 1, Luxembourg 1, Mauritius 1, Netherlands 3, Norway 1, Portugal 1, South Africa 1, Switzerland 1, Thailand 1 and USA 4.

We are always extremely grateful for donations, but still receive a small number that prove to contain either no spores at all or so few spores that we cannot list that taxon. This is made worse by the knowledge that the donor would have spent considerable time collecting what they believed to be an adequate donation of spores. We hope that donors will not be offended if we let them know of any problems with their donations. If there are any queries about donating spores, please feel free to email spores@ebps.org.uk and we will do our best to help. May we also make a heartfelt plea that species names etc. are written very clearly in CAPITAL LETTERS – it can take a considerable amount of time to look up all the possible permutations on the internet!

We are extremely grateful to Matt Busby for taking on the exchange, and it is to be hoped that a more permanent team can soon be in place. It remains only to say thank you to the loyal band of donors, without whom we would not have this valuable service.

PLANT EXCHANGE ORGANISER – Jonathan Crowe

Donor forms were distributed with the spring 2008 mailing. The Plant Exchange List was compiled and distributed at the end of May 2008.

Statistics for taxa offered are shown below:

Status Code	Plant Status Description	No. in 2003	No. in 2004	No. in 2005	No. in 2007	No. in 2008
Sp0	Sporeling less than 1 year old	3	10	0	0	6
Sp1	Sporeling 1-2 years old	8	13	15	13	17
Sp2	Sporeling 2-3 years old	10	13	15	7	19
Esp	Established plant	3	11	39	7	20
Bul	Bulbil	7	0	0	1	6
Rhs	Rhizomes	9	11	1	1	1
	Plant status not stated by donor	21	0	0	0	0
	Totals	**61**	**58**	**70**	**29**	**69**

The statistics for participants are shown below:

Category of Participant	2003	2004	2005	2007	2008
Donors only (thus only offering plants)	8	6	8	7	4
Donors also having 'wants'	7	5	-	-	3
'Wanters' only (thus not offering plants)	9	3	-	-	-
List requesters only (neither offering plants nor having 'wants')	10	16	19	13	3
Total number of participants	**34**	**30**	**27**	**20**	**10**

It can be seen that participation in the scheme has halved compared to last year. However, the number of taxa offered has more than doubled, possibly because the spring mailing is a better time to distribute donor forms. Despite few taking up the opportunity in 2008, it is intended to retain the 'wants' feature next year.

BOOKSALES ORGANISER – Frank Katzer

It has been yet another very busy year for BPS booksales. Sales have been down, with just over £750 worth of sales but the emphasis has been on stocking up. Initially I acquired selections of new books and they will become a useful stock when they go out of print. The main event of the year was the purchase of Nigel Hall's collection of over 250 books. These will be for sale at the next AGM. To make this sale as fair as possible to all members we decided to auction the books that are of interest to multiple members. My main task at the moment is to price them and to identify which books will generate most interest at the AGM. I hope that the auction will be a success and that most people interested in fern books will be able to buy items for their collections. BPS booksales is very grateful for the bequest of the book collection of Barbara Porter, who died in June 2008. As usual BPS booksales will always welcome bequests of books or offers to purchase either individual books or whole collections. Please keep in mind that I cannot offer internet prices but then neither would book shops. To contact me please use either my work e-mail: Frank.Katzer@moredun.ac.uk or the booksales e-mail: Booksales@eBPS.org.uk, by post: 13 Hawdene, Broughton ML12 6FW, Scotland, or by phone +44 (0)1899 830374.

MERCHANDISE ORGANISERS – Bryan & Gill Smith

We returned to a reasonably successful year for Merchandising in 2008, which was encouraging. We had around 25 mail orders (which came from the UK, USA, South Africa, Denmark, Hungary and Eire) compared with only three (from the UK and Italy) in 2007. Face-to-face selling also continued, and we sold merchandise at the AGM in April and the *Asplenium* Workshop in November. For all national meetings we attended, we gave attendees

the option to pre-order items. Colleagues in the north, as before, sold merchandise at the Southport show (August), and at the AGMs of the Yorkshire Regional Group and the North-West Regional Group. Overall, sales amounted to nearly £1,000, compared with less than £800 in 2007. Further details can be found in the Merchandise section of the Treasurer's accounts.

The current merchandise list (October 2008), which was distributed with the autumn mailing, boasts some 17 ranges and a total of over 40 individual products. We were particularly pleased to produce and include the first ever BPS calendar using Bryan's photos. Encouraged by the success (nearly 40 were sold), we will do this again for a 2010 calendar, and members are encouraged to submit photos for possible inclusion.

The list continues to be available through the BPS website, and we send out copies when we fulfill orders. It is still our aim to add photographs of items to the website. If anyone has any ideas for ferny items that they'd really like to see and that they think other members would also like to buy, please do let us know.

HORTICULTURAL INFORMATION ADVISER – Matt Busby

During this year I received only two communications by post, one asking for advice on the cultivation of *Osmunda regalis* in pots and one from a member of the gardening public asking me to recommend a supplier of *Botrychium lunaria*. This gardener was suitably advised of the situation regarding this species; however, it was heartening to know that their local garden centre had recommended our Society for expert advice.

ARCHIVIST – Matt Busby

The move of the Archive from Coventry to Manchester Museum anticipated during 2008 has not occurred owing to reasons outside the control of the Society's Committee. I am hopeful that the move will take place in the foreseeable future. During the year various items have been added to the Archive and a few members have requested information from it for their researches. Work has begun on digitising the more important colour-slides and I am indebted to Roger Golding for his assistance.

May I appeal to members to consider donating items to the Society Archive? We would particularly welcome photographs and colour-slides of members and meetings, especially from the 1950s and 1960s.

FERN VARIETIES NOMENCLATURE SUBCOMMITTEE – Matt Busby

Once again this subcommittee has remained inactive for another year. The subcommittee consists of Dr Alan Leslie, Martin Rickard, and me as convener.

THE AMERICAN FERN SOCIETY

The AFS invites all readers of this *Bulletin* to join the American Fern Society. You are welcome to visit the AFS website: amerfernsoc.org. Regular members receive *Fiddlehead Forum* five times a year, a newsletter published for those who are interested in growing ferns, hunting for them and expanding their knowledge of ferns. Journal members also receive the scientific quarterly *American Fern Journal*. Membership costs $19 and $32 per annum respectively for members residing outside USA, Canada or Mexico, including postage for airmail-assisted delivery. For particulars please write to Dr George Yatskievych, Missouri Botanical Garden, P.O. Box 299, St Louis, Missouri 63166-0299, USA (george.yatskievych(*a*)mobot.org). Online credit card payment is now available for the AFS via the AFS website.

AFS SUBSCRIPTION PAYMENTS: Our societies have an exchange arrangement whereby members of the BPS can pay their AFS subscription through the BPS Membership Secretary and *vice versa*. To take advantage of this, prospective members residing in Great Britain should contact Mr M.G. Taylor, Westlea, Kyleakin, Isle of Skye IV41 8PH (Membership(*a*)eBPS.org.uk).

CONSTITUTION
OF THE BRITISH PTERIDOLOGICAL SOCIETY

Registered Charity No. 1092399

Adopted at the Annual General Meeting on 5 April 2008

1. NAME

The Society shall be called "The British Pteridological Society".

2. OBJECTS

The objects of the Society are to promote all aspects of pteridology by encouraging the appreciation, conservation, cultivation and scientific study of ferns, horsetails, clubmosses and quillworts through publications, meetings, the provision of grants and other appropriate means.

3. MANAGEMENT

3.1 The Officers of the Society shall consist of a President, a President-elect, for one year before his/her term as President, up to six Vice-Presidents, a General Secretary, a Committee Secretary, a Treasurer, a Publications Secretary, the Senior Editors of the Society's regular publications and the Society's Web Site, a Membership Secretary, a Meetings Secretary, a Conservation Officer, a Project Officer and such others as the Society may appoint from time to time. All posts are honorary.

3.2 The Management of the Society shall be in the hands of a Committee consisting of not more than ten elected members with the addition of the Officers of the Society. Eight members, including at least two of the President, the General Secretary, the Committee Secretary and the Treasurer, shall constitute a quorum. The Committee shall have the power to co-opt additional members, who shall retire at the next Annual General Meeting.

3.3 Any holder of a Committee appointment, such as Spore Exchange Organiser, Plant Exchange Organiser, Merchandise Organiser, Booksales Organiser, or Archivist, who is not also either an elected Officer of the Society or an elected Member of the Committee, will be eligible to attend Committee Meetings but will have no voting rights.

3.4 The election of Officers and members of the Committee shall take place at the Annual General Meeting. Terms of office shall be as follows:

3.4.1 President: three years, not eligible for re-election in the following three years.

3.4.2 The President-elect will be elected to the presidency one year before the expiry of the term of the current President, and will serve that one year as President-elect before taking up office.

3.4.3 Vice-presidents: three years, eligible for re-election.

3.4.4 All other officers: one year, eligible for re-election.

3.4.5 Elected members: one year, eligible for re-election, up to a maximum of five years, thereafter eligible for re-election after a lapse of one year.

3.5 Nominations for Officers and members of the Committee must normally be received by the Committee Secretary ten days before the Annual General Meeting.

3.6 A resolution in writing signed and agreed to by all members of the Committee for the time being in the United Kingdom shall be as valid and effectual as if it had been passed at a meeting of the Committee duly called and held, and may consist of several documents in the like form each signed by one or more members of the Committee.

3.7 The Committee may fill any casual vacancy amongst its Officers or Committee members until the next Annual General Meeting.

3.8 All Committee members shall be Trustees of the Society within the meaning of the Charities Act 1993 (or any statutory modification or re-enactment of that Act).

4. POWERS

4.1 In furtherance of the objects but not otherwise the Committee may exercise the following powers:

4.1.1 to raise funds and to invite and receive contributions provided that in raising funds the Committee shall not undertake any substantial permanent trading activities and shall conform to any relevant requirements of the law;

4.1.2 to buy, take on lease or in exchange any property necessary for the achievement of the objects and to maintain and equip it for use;

4.1.3 subject to any consents required by law to sell, lease or dispose of all or any part of the property of the Society;

4.1.4 subject to any consents required by law to borrow money and to charge all or any part of the property of the Society with repayment of the money so borrowed;

4.1.5 to employ such staff (who shall not be members of the Committee) as are necessary for the proper pursuit of the objects and to make all reasonable and necessary provision for the payment of pensions and superannuation for staff and their dependants;

4.1.6 to co-operate with other charities, voluntary bodies and statutory authorities operating in furtherance of the objects or of similar charitable purposes and to exchange information and advice with them;

4.1.7 to establish or support any charitable trusts, associations or institutions formed for all or any of the objects;

4.1.8 to do all such other lawful things as are necessary for the achievement of the objects.

4.2 An Executive Committee comprising the President, General Secretary, Committee Secretary and Treasurer shall have power to act on urgent matters arising between Committee meetings. The Executive Committee shall report its actions to the Committee at the earliest opportunity.

4.3 The Committee may appoint from its own body, with or without the addition of other members, such other committees as may be needed. The Committee may also appoint assistants to any Officer; such assistants shall be entitled to deputise for the respective Officers at meetings.

5. RECEIPTS AND EXPENDITURE

5.1 The funds of the Society, including all donations contributions and bequests, shall be paid into an account operated by the Committee in the name of the Society at such bank as the Committee shall from time to time decide. All cheques drawn on the account must be signed by at least two members of the Executive Committee.

5.2 The funds belonging to the Society shall be applied only in furthering the objects.

6. ACCOUNTS

The Committee shall comply with their obligations under the Charities Act 1993 (or any statutory re-enactment or modification of that Act) with regard to:

6.1 the keeping of accounting records for the Society;
6.2 the preparation of annual statements of account for the Society;
6.3 the auditing or independent examination of the statement of account of the Society; and
6.4 the transmission of the statements of account of the Society to the Charity Commission.

7. GENERAL MEETINGS

7.1 The Annual General Meeting of the Society shall be held at such time and place as the Committee may decide for the purpose of passing accounts, electing Officers and the Committee and transacting the general business of the Society.

7.2 An Extraordinary General meeting shall be called by the Committee Secretary within thirty days of receiving a request in writing from the Committee or from not less than twenty members stating the purpose for which such a meeting is required.

7.3 At least twenty-one days notice of any General Meeting shall be given to all members.

8. NOTICES

The accidental omission to give notice of a meeting to, or the non-receipt of notice of a meeting by, any member shall not invalidate any proceedings or resolutions at any meeting of the Society or any committee thereof except in the case of removal from membership.

9. ORDINARY MEMBERSHIP AND SUBSCRIPTIONS

9.1 The annual subscription payable by members shall be payable in advance and due on the First of January in each year, or on joining the Society.

9.2 The rates of subscription shall be fixed by a General Meeting from time to time.

10. HONORARY MEMBERSHIP

The Committee may elect any person or persons to Honorary Membership of the Society. Honorary Members shall be entitled to all the privileges of membership, but shall not be liable for payment of any subscription.

11. REMOVAL FROM MEMBERSHIP

11.1 Any member whose subscription is unpaid within six calendar months of it becoming due shall be liable to have his/her name removed from the list of members of the Society.

11.2 Any member whose conduct in the opinion of the Committee is prejudicial to the interests of the Society may be removed from membership by a two-thirds majority vote of those present at a meeting of the Committee on the Agenda of which the words "Removal of a Member" shall have appeared; provided no member may be so removed unless due notice has been sent to the member of the intention of the Committee to proceed under this rule and of the nature of the charges made and an opportunity has been afforded of answering such charges to the satisfaction of the Committee. A member so removed shall forfeit any claim upon the Society.

12. AWARDS

The Committee may make awards in respect of outstanding scientific or horticultural achievements in the field of pteridology.

13. ALTERATION TO RULES

13.1 Any proposal for alteration or addition to this Constitution shall be in writing, and shall be signed by twenty members, and be deposited with the General Secretary not less than thirty days before the Annual General Meeting or before an Extraordinary General Meeting called for the purpose. Such alteration or addition shall be included in the Agenda of that meeting and circulated to all members and shall not be carried unless the votes of two-thirds of the members present at the meeting are cast in favour.

13.2 No alteration shall be made which would have the effect of making the Society cease to be a charity at law.

14. DISSOLUTION

The Society may be dissolved by a vote of at least three-quarters of those present and voting at an Extraordinary General Meeting called for that purpose and if an effective resolution for dissolution is passed the surplus funds and property of the Society shall be disposed of to an agreed charitable organisation of similar interest.

OBITUARIES

GERALD DOWNEY 1935 – 2008

Gerry joined the Society in 1974. I think I first met him early in 1975. He had read a brief article I had written in the 1974 *Bulletin* describing my fern hunting in the French Alps. Even then Gerry was an incredibly keen collector of ferns and alpines and some of the species I had seen in France were on his wants list, as were many more I had not seen! Gerry contacted me and from then on we met most years either at his home in Bicknacre or mine in Saffron Walden, and later in Pampisford. Prior to contacting me he was also in touch with Christopher Fraser-Jenkins who supplied him with much fascinating material from his worldwide travels.

Gerry's garden was fabulous. It was full of treasures yet managed to be aesthetically attractive at the same time. He had several greenhouses full of ferns and alpines. I remember him showing me an alpine he had bought for £5. I was astonished – such extravagance! Could any plant really be worth £5?! (Remember this was in 1975.) The greenhouses were full of potted specimens but he did plant out many rarities in the garden – so long as he always had a duplicate under glass. His garage was quite large and at the back he had a workshop where he had installed a filmy fern case. This particularly fascinated me. Most species he grew were from Australia or New Zealand. He had obtained them from tree fern trunks! By keeping the trunks in high humidity it seemed that filmy ferns were easily encouraged to grow out of them.

Alongside his garden was a drainage ditch, always dry when I saw it. Not his property but it served as an overflow bed. I particularly remember *Polystichum mohrioides* from South America here! Most of Gerry's ferns were species, not cultivars. He had, however, acquired a few cultivars over the years and I obtained my first *Polypodium* cultivar from him – *P. australe* (*cambricum*) 'Whilharris'. He was one of the first people I ever knew growing *Dicksonia antarctica*. He had a large-fronded multi-crowned specimen in a container – which by the late seventies had not produced a trunk!

His interest in plants led him to collect relevant books. I have not seen his collection since the 1970s but it was very good then. Mainly modern reference works – often very difficult to come by. My first ever trip to the Chelsea Flower Show (probably 1976) was with Gerry. I think we only really went to look at Daniel Lloyd's book stall! The only ferns in the show were a very nice display put on by Fibrex Nurseries and a mixed display by Maurice Mason featuring some wonderful specimens of various *Platycerium* taxa, but the books were the lure!

In 1981 I moved to Herefordshire and largely lost touch with Gerry. His interest in growing ferns and alpines continued but to some extent I think his passion for photographing birds took over. Much more recently Gerry started coming to London meetings again and it was good to re-establish contact. I know he was also involved with the East Anglian BPS Group; perhaps it was the formation of this group that stimulated his renewed vigour for ferns? Sadly he was only able to attend local day meetings of the BPS because he could not easily leave his garden untended for too long. Who'd be a gardener?! I'm sure his enthusiasm was helped by Pat Acock regularly giving him spores whenever he could from his overseas trips. Other members also exchanged with him, notably Clive Brotherton and more recently, Tim Pyner. Needless to say, Gerry was a very successful fern propagator. At the time of his death I believe he had dozens of spore cultures 'on the go'.

Throughout this time Gerry was married to June, who supported his various interests, and keenly joined him on overseas collecting trips. It is thanks to her generosity that most of Gerry's collection of ferns, spore cultures and alpines have been distributed to good homes. Hopefully in the future we will frequently hear that 'This plant came from the Gerry Downey collection'.

Martin Rickard

I got to know Gerry as he became a regular at East Anglia group meetings over the last ten years. By this time he had retired and he and June had moved to Frinton-on-Sea on the North Essex coast from their previous home in Bicknacre. I was aware of his almost mythical status as a grower and collector of rare and obscure ferns principally through frequent mentions in Richard Rush's *Hardy Ferns*. I had also noticed pans of unusual ferns shown by Gerry at Alpine Garden Society Shows that were always grown and presented to a very high standard.

photo: B.D. Smith

Gerry Downey (2006)

Once Gerry decided to get involved with the local group and I got to know him I began to realise what a depth of knowledge he had as well as a complete dedication to studying, collecting and growing ferns. He had an immense and wide-ranging knowledge of ferns and a large number of colleagues and acquaintances who were happy to send spores or plant material. In the last few years he had become very interested in polystichums and was building up a sizeable collection. In particular he was very keen on the *P. mohrioides/plicatum* group that occur in South America and the Falklands. I was always astounded that he was able to make contact with visitors and residents in the Falklands who were able to provide spores and material that he was able to grow on even though they may have been in the post for weeks.

A visit to Gerry's garden was a real treat for fern enthusiasts. Here you could see a vast array of ferns ranging from tree ferns to the tiniest alpines. There was always a large number of sporelings being grown on, often of the most obscure species. Gerry was also very interested in small aspleniums and was often trying to raise hybrids. He was very generous and when I moved house he invited me to his garden and after we had walked round he presented me with a selection of potted ferns and divisions.

His pots of ferns used for exhibiting at AGS shows took pride of place in his alpine house and were a fantastic display of his skills as a grower. Gerry was very single minded and this was very evident in his competitive nature when it came to shows. I recall how judges were often described in less than glowing terms when one of Gerry's much prized and rare ferns failed to gain the praise and rewards it was worthy of.

On several occasions Gerry and I would share a car journey to BPS meetings. He would describe in great detail his current interests and would always be keen to know what I was currently growing. He was a mine of information and interesting anecdotes. He was a very keen traveller and he and June went to some very exotic destinations where he was often able to collect spores and grow them on successfully once he got home.

I spoke to Gerry a couple of days before he died and he was looking forward to the spring East Anglia group meeting the following weekend. As usual he was full of excitement and was looking forward to bringing plants and specimens and wondering if I could bring any polystichums along. His passing was completely unexpected and was a great shock to his family and friends. Gerry is a great loss and we will miss his knowledge, enthusiasm and humour. He was also a valued friend, and the Society has lost one of its most outstanding members.

Tim Pyner

WALLACE P. FYFE 1935 – 2008

It was July 1994. My tent was installed by the seashore of the west Kyle of Bute and I was idly wandering through Rothesay, getting my bearings in a place I had last visited when I was 15. A leaflet entitled *Ascog Victorian Fernery* caught my eye, so I instantly knew what would occupy that day. I decided to declare my pteridological credentials to the friendly couple who welcomed me and was given a VIP tour of the fernery – re-established that April, though you'd hardly have known it – followed by tea and cake at the kitchen table. I returned to Bute regularly for the next eight years and always enjoyed special hospitality at Ascog. When I visited with a party everybody received the same welcome, for that was the way of the Fyfes, Wallace and Kath.

They never dreamt they owned their glorious fernery until weed clearance revealed it in the garden they had taken on years before. Having found their ruins, they threw all their energy and enthusiasm into this unexpected new project, and after meticulous restoration they shared it with the public and welcomed friends in the worlds of horticulture, garden history and pteridology. The Fyfes displayed dedication, and constant willingness and ability to learn – not only from specialists at the RBGE and Historic Scotland and those of us who visited, but also by careful observation of the ferns in their care. I remember seeing small plants of *Adiantum reniforme* being painstakingly cultivated and then planted – observed – assessed – considered – moved – and lamented when they died, until one lucky specimen found itself in the right niche. *A. reniforme* was no longer a problem, and the process was applied to all of the plants in their care.

My relatively recent friendship was with both Wallace and Kath, discussing the fernery, exploring the island, at Buteshire Natural History Society meetings and, most of all, at the kitchen table where we shared our love of cooking, eating and good fun. I will never forget our last meeting, his outstretched hand and friendly smile of welcome to our party undulled by the crushing illness that was soon to take him. He and Kath enthusiastically led us once more down the steps into the place that united us all in our mutual pleasure in ferns. The gasps from new visitors said it all about the Fyfes' extraordinary feat, their restored Ascog Fernery.

Wallace is survived by Kath, his daughter and grandchildren.

James Merryweather

JOHN ANTHONY HICKS 1928 – 2008

With sadness I report the death of John Hicks. It is hard to believe that he was 80 years old – he had an enthusiasm and passion for wildlife and its conservation that belied his age. John joined the BPS in 1999 and was a frequent attender of meetings, particularly of the South-East Group. As recently as June 2008 he hosted a meeting at his home in Battle, East Sussex. We were able to view his garden and very fine fernery, of which he was justifiably proud. He helped to found, and was a Trustee of, the Powdermill Trust for Nature Conservation, and at our meeting we were able to visit this large wood, which has a rich and interesting fern flora. This was not the only conservation group that John was a keen member of and the South-East owes a debt of gratitude to the work that he instigated and carried out.

John was a kind and gentle man, with a keen sense of humour and an interest in so many things. He was devoted to Jean, his wife of 59 years, and our sympathy goes out to her, and to their children Dominic and Theresa and their families.

Paul Ripley

Dr PAT HILL-COTTINGHAM 1930 – 2008

It is with sadness that we learn of the death of the renowned Somerset naturalist Pat Hill-Cottingham who, with her husband Den, was a keen member of the British Pteridological Society since 1985. Pat became 'hooked' on ferns after attending, with Den, one of Chris Page's courses at Pitlochry. As a professional zoologist and biology teacher, her keen observational skills enabled her rapidly to embrace fern taxonomy. She gave many talks on ferns (and on a wide variety of other subjects) to local societies, including Somerset Wildlife Trust (SWT), Somerset Archaeological and Natural History Society and Bristol Naturalists' Society.

Pat's pteridological studies included the publication of *Somerset Ferns – A Field Guide* (1989), a useful handbook with identification keys and accounts of all the species found in VCs 5 & 6 (South and North Somerset), accompanied by her own beautiful line drawings. My own interest in ferns was developing at this time and I still have herbarium specimens of *Polypodium* collected in the Mendip Hills that Pat helped me to identify, with tabulated counts of annulus and basal cells, which are so important in determining the taxa within this difficult group. She contributed fern records for *The Atlas Flora of Somerset* (1997) and the *Flora of the Bristol Region* (2000). From the 1960s to 1990s, Pat and Den visited New Zealand where she studied tree ferns and I remember her enthusiastic accounts and her accomplished photographs of the pteridological delights of that country.

Pat's scientific curiosity led her to write numerous papers and reports, especially relating to the natural history of Catcott Heath, where she was SWT's Reserve Manager. She was senior editor of *Somerset's Wetlands: An Ever Changing Environment* (2006), a beautifully illustrated account of the wildlife and archaeology of the Somerset Levels and Moors. Pat was a tireless campaigner, a passionate conservationist and committed educationalist and inspiring teacher. She will be greatly missed.

Liz McDonnell

ALFRED EDWIN HOARE 1918 – 2008

photo: BPS archives

Alf Hoare

Alf Hoare died on the 18th January 2008, just 16 days short of his 90th birthday. Alf, a retired electrical engineer and his late wife Rachel joined the Society in 1970 and frequently attended Society meetings together. He was a knowledgeable plantsman whose interest extended further than hardy ferns and he was a keen member of many specialist societies covering alpines, bonsai, clematis, cyclamen and lilies, as well as being a member of the Royal Horticultural Society. He was also a keen bowls and bridge player.

I recall many conversations with him concerning his triumphs and failures with his propagation and cultivation of ferns. Arguably his greatest triumph was the delightful dwarf form of *Asplenium scolopendrium* that he raised from spores. He exhibited it at the Society's Centenary Fern Show held in the village hall at Pebworth, Warwickshire on 13th July 1991. This diminutive fern was awarded a certificate for the most interesting fern in the show. He was also awarded the Society's Certificate of Merit for the same variety.

One of his last comments was to thank all his friends whoever they may be for being so kind to him all his life. So passes a member of great worth, we shall miss his good company and generosity. Rachel (Rae) Hoare died on 15th April 1983 (see *Bulletin* Vol. 2 No. 5, 1983).

I am indebted to Howard Matthews for keeping us informed of Alf's progress in his last few years and Alf's friend Bunny Goldsmith and his sister Mrs Phyllis King for the facts about Alf's life and interests.

A.R. Busby

EDWARD NEEDHAM

c. 1932 – 2008

A few years ago, I was told of Edward's mysterious but wonderful Cornish valley garden where permission to visit was difficult to obtain. Only friends of Edward could visit, or perhaps friends of his friends! This tended to allow access only to people who understood his interests, often 'plantsmen'. Not sure whether or not I was a plantsman, I was a little apprehensive about making contact but I persisted. I need not have worried! Edward was in fact charming and particularly pleased to show his garden to someone interested in ferns. That was my first visit in 1986. From then until his death early in 2008 I think I must have visited him at least once a year.

Edward had bought the garden in 1972 after it had been neglected for 33 years. The original garden had been laid out in what was basically an oak-wooded valley. There were a few remaining specimens including red rhododendrons, *Pittosporum tobira*, *Podocarpus salignus* and I presume most importantly tree ferns, which quite happily naturalise around the garden. He started by clearing and planting out many of the plants that he had collected for many years. It was the perfect environment for developing a woodland garden, especially for the Himalayan plants that he had a particular interest in. Edward's knowledge of growing plants and understanding their needs was second to none, and by using the microclimates in the garden he had great success in cultivating a very wide set of plants. The garden was fabulous and truly was a plantsman's garden.

At the time of my first visit, he already had a very good collection of ferns, including several species of tree ferns. He did not grow cultivars, just species. I was astonished to see Chinese terrestrial and epiphytic species that I had never seen before growing out of doors. Several were regenerating naturally in the soft Cornish climate. As many had been collected in the wild, Edward did not have names for them all. He pressed me for names but I was little help. Later Christopher Fraser-Jenkins paid him a visit but even he was stuck on some of the polystichums!

Over the years, Edwards's collection of ferns grew strongly to reach the point that I considered it the best garden in Britain for ferns – even though it held very few cultivars. The range of plants grown other than ferns was also astonishing. His interest in ferns was still growing when I last saw him late in 2007. He was planting a large new area with mainly southern hemisphere species. They all seemed to be settling in well. I visited again in early autumn 2008 and the garden was still looking wonderful.

Most years Edward collected material from

photo M.H Rickard

Edward Needham (2006)

various exotic places, China being a particular favourite. The widely grown *Woodwardia unigemmata* from Mt Omei was one of his introductions. He has been responsible for others – many unnamed! He was an intermittent member of the BPS. He was initially enrolled as a gift of Bridget and Michael Graham of Polpey. Although he did not participate in Society activities apart from the spore exchange, Edward was a very important member of the fern growing community. Many members visited his garden over the years. All were inspired by its beauty and its wonderful collection of plants, and his generosity.

As with all gardens, the death of the owner presents problems. Fortunately Edward was far sighted enough to arrange to leave his garden in the care of his good friend Tom Hudson of Tregrehan near St Austell. Tom in turn has now entrusted the care of the garden to Fiona and John Lanyon, both of whom are passionate horticulturalists and fern lovers. Until recently John was the Head Gardener of Knightshayes Court in Devon and is now the Garden Manager for Trelissick and Glendurgan.

Martin Rickard (with factual assistance from John and Fiona Lanyon)

BARBARA PORTER

1921 – 2008

Barbara joined the BPS in 1993. She was a popular member of the Society and a very capable field botanist. She thoroughly enjoyed going on fern excursions when she was able and many people have said how much they enjoyed her company. The last meeting she attended was the AGM at Cambridge Botanic Garden in 2006 and I enjoyed her company very much over that weekend.

photo: S. Grieve

Barbara Porter (2007)

I learned from Barbara's brother that she had been interested in all aspects of natural history since childhood, pursuing this interest all her life through her school teaching career and whilst bringing up her five children. Barbara's daughter Alison has told me of many happy family holidays and country walks spent looking for wild plants, bird watching and even monitoring mountain hares with her grandson. She was never without her camera and accumulated a huge collection of slides.

photo: Y. Golding

Plaque at The Firs, Manchester

In her retirement Barbara worked for ten years as a volunteer in the herbarium at Manchester Museum and wrote an article about this experience in *Pteridologist* 2007. During this period she 'sorted out the ferns' and successive herbarium staff became very fond of her. She continued 'tipping up at the museum' until just a few months before her death. I really miss our regular museum day lunch dates.

Barbara was also an excellent horticulturalist (as was her mother) and

grew some cracking ferns in her garden in Marple. Her favourite fern was her namesake *Todea barbara*, which she kept in a large pot by the back door during the summer and in her cold conservatory in the winter. I have inherited this plant and just hope I can care for it as she did.

Towards the end of her days Barbara wanted to make provision for her fern collection so she bequeathed them to the University of Manchester Botanical Grounds (The Firs) where, together with her colleagues from the museum and some of her family, we have created and planted a border so that others might also enjoy Barbara's ferns.

Yvonne Golding

IN MEMORIAM

We were also sorry to learn of the death of the following (date joined BPS in brackets):

Mrs Rita Coughlin of Bromsgrove (1969). An obituary will be published in the 2009 *Bulletin.*

Mr Milton Edwards of Belgrave, Australia (2006)

Mr Bob Halley of California, USA (1989)

Claude Jérôme of France who, whilst not a BPS member, was an active member of the GEP (Group of European Pteridologists).

MEMBERSHIP LIST: ADDITIONS & AMENDMENTS

NEW MEMBERS

** new members 2008, ** new members 2009, # members rejoined 2008*

** AMS/Museum Natural SC, PO Box 750, 1430 At Aalsmeer, The Netherlands
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MEETINGS PROGRAMME 2009

Meetings Secretary: R.J. Cooke
Meetings Subcommittee: P.J. Acock, R. Golding, N.J. Hards, J.M. Ide, P.H. Ripley, M.H. Rickard

Sat. 4 April	**AGM & Spring Indoor Meeting – Manchester Museum** Leader: Yvonne Golding
Mon. 13 - Thurs. 30 April	**Overseas Field Meeting – Australia** Leaders: Jennifer Ide & Barry White
Sat. 6 June	**Day Meeting – Royal Botanic Gardens Kew, Surrey** Contact: Martin Rickard
Sat. 4 - Sun. 5 July	**Weekend Field Meeting – Kent & Sussex Weald** Leaders: Paul Ripley & Pat Acock
Wed. 22 - Sun. 26 July	***Tatton Park Flower Show, Manchester: BPS Stand** Contact: Yvonne Golding
Thurs. 20 - Sun. 23 Aug.	***Southport Flower Show: BPS Stand** Further Info.: Michael Hayward
Sat. 12 - Sun. 13 Sept.	**Weekend Meeting with BSBI on *Dryopteris affinis* – Cornwall** Leaders: Matt Stribley, Ken Trewren & Fred Rumsey
Sat. 26 Sept.	**Fern Day – Manchester Museum** Contact: Yvonne Golding
Wed. 30 Sept. - Tues. 13 Oct.	***Overseas Field Meeting with HFF – California, USA** Leader: Sue Olsen
Sat. 31 Oct.	**Autumn Indoor Meeting – *Hymenophyllum* Workshop – University of Reading** Leader: Paul Ripley

** Event supported by, but not organised by, the BPS.*

For further details of these and other meetings of interest to members, including information on accommodation, please see the separate Meetings Programme sheet. This can be sent to overseas members on request and is also available on the BPS website.

Regional Meetings

Please note: Regional group meetings are open to all members, so if you are travelling through or holidaying in one of the following areas you would be very welcome to join in. For details of meetings please see the BPS website or contact the regional organisers by e-mail, or by post enclosing a stamped addressed envelope.

Yorkshire	Bruce Brown, 4 Bank Parade, Otley, West Yorks. LS21 3DY Yorkshire@eBPS.org.uk
South-East England	Paul Ripley, 2 Station Villas, Station Road, Appledore, Ashford, Kent TN26 2DF; SouthEast@eBPS.org.uk
East Anglia	Tim Pyner, 182 Southchurch Boulevard, Southend-on-Sea, Essex SS2 4UX; EastAnglia@eBPS.org.uk
North-West England	Peter Campion, Lake View, Castle Hill, Bassenthwaite, Keswick, Cumbria CA12 4RG; NorthWest@eBPS.org.uk
Cornwall	Matt Stribley, 8 St George's Road, Truro, Cornwall TR1 3JE Cornwall@eBPS.org.uk
Scotland	Frank McGavigan, 12 Glenbank Avenue, Lenzie, Glasgow G66 5AA Scotland@eBPS.org.uk
S. Wales & Borders	Brian Dockerill, 19 Westfield Road, Glyncoch, Pontypridd, Mid-Glam., CF37 3AG; SouthWalesBorders@eBPS.org.uk

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